# 1965

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# STATE BOARD
# OF
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## 1965

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## 1965

## ANNUAL REPORT

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*Annual Report*

# State Board of Health

## *State of Florida*

## 1965

6-13-66

**WILSON T. SOWDER, M.D.**
STATE HEALTH OFFICER

JACKSONVILLE, FLORIDA

*The Honorable* Eugene G. Peek, Jr., M.D., President
Florida State Board of Health
Ocala, Florida

Dear Dr. Peek:

I herewith submit the annual report of the Florida State Board of Health for the year ending December 31, 1965.

Sincerely yours,

WILSON T. SOWDER, M.D., M.P.H.
State Health Officer

May 1, 1966
Jacksonville, Florida

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*His Excellency,* Haydon Burns
Governor of Florida
Tallahassee, Florida

Sir:

I herewith present the report of the Florida State Board of Health for the period of January 1, 1965 to December 31, 1965, inclusive.

Respectfully,

EUGENE G. PEEK, JR., M.D.
President

May 1, 1966
Ocala, Florida

Members of the

**FLORIDA STATE BOARD OF HEALTH**

EUGENE G. PEEK, JR., M.D., *President*
Ocala

T. M. CUMBIE, Ph.G., *Vice-President*
Quincy

LEO M. WATCHEL, M.D.
Jacksonville

WILLIAM O. SHUMPERT, D.D.S.
Ft. Lauderdale

W. S. HORN, D.O.
Palmetto

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## DIRECTORS OF COUNTY HEALTH DEPARTMENTS

*(as of December 31, 1965)*

| | |
|---|---|
| Alachua | Edward G. Byrne, M.D., M.P.H. |
| Bay | A. F. Ullman, M.D. |
| Brevard | T. Paul Haney, M.D., Dr.PH. |
| Broward | Paul W. Hughes, M.D., M.P.H. |
| Collier | Clyde L. Brothers, M.D. |
| Dade | T.E. Cato, M.D., M.P.H. |
| Duval | Patricia C. Cowdery, M.D. (Acting) |
| Escambia | E. E. Metcalfe, M.D. |
| Hillsborough | John S. Neill, M.D., M.P.H. |
| Lake | J. Basil Hall, M.D., M.P.H. |
| Leon | Clifford G. Blitch, M.D. |
| Manatee | George M. Dame, M.D. |
| Marion | James B. Stapleton, M.D. |
| Monroe | Jose T. Sanchez, Jr., M.D. (Acting) |
| Okaloosa | Henry I. Langston, M.D., M.P.H. |
| Orange | Wilfred N. Sisk, M.D., M.P.H. |
| Palm Beach | C. L. Brumback, M.D., M.P.H. |
| Pinellas | John T. Obenschain, M.D., M.P.H. |
| Polk | James F. Cason, M.D. |
| St. Johns | Mason Morris, Jr., M.D. |
| Santa Rosa | A. E. Harbeson, M.D. |
| Sarasota | Elton S. Osborne, Jr., M.D., M.P.H. (Acting) |
| Seminole | Frank Leone M.D. |
| Volusia | D. V. Galloway, M.D., M.P.H. |
| Baker-Nassau | B. F. Woolsey, M.D. |
| Calhoun-Jackson | Terry Bird, M.D., M.P.H. |
| Flagler-Putnam | James R. Sayers, M.D. |
| Franklin-Gulf | Elton S. Osborne, Jr., M.D., M.P.H. (Acting) |
| Gadsden-Liberty | B. D. Blackwelder, M.D., M.P.H. |
| Jefferson-Wakulla | P. H. Smith, M.D. |
| Madison-Taylor | Luther A. Brendle, M.D., M.P.H. |
| Osceola-Indian River | C. C. Flood, M.D., M.P.H. |
| Pasco-Sumter | John L. Ingham, M.D. |
| Bradford-Clay-Union | A. Y. Covington, M.D., M.P.H. |
| Charlotte-Desoto-Hardee | Francis R. Meyers, M.D. |
| Citrus-Hernando-Levy | H. F. Bonifield, M.D., M.P.H. |
| Columbia-Hamilton-Gilchrist | F. Barton Wells, M.D. |
| Glades-Hendry-Highlands | William F. Hill, Jr., M.D., M.P.H. |
| Holmes-Walton-Washington | William G. Simpson, M.D., M.P.H. |
| Martin-Okeechobee-St. Lucie | Neill D. Miller, M.D. |
| Suwannee-Dixie-Lafayette | John S. Williams, M.D. |

# OFFICIAL STAFF FLORIDA STATE BOARD OF HEALTH

*(As of December 31, 1965)*

| | |
|---|---|
| State Health Officer | Wilson T. Sowder, M.D., M.P.H. |
| Deputy State Health Officer | Malcolm J. Ford, M.D., M.P.H. |
| Deputy State Health Officer | Elton S. Osborne, Jr., M.D., M.P.H. |
| Encephalitis Research Center | |
| Assistant State Health Officer | James O. Bond, M.D., M.P.H. |
| Coordination of Training | Robert V. Schultz, M.D., M.P.H. |
| Division of Health Education | Vincent Granell, B.S., M.S., Ed.D. |
| Librarian | Mildred T. Clark, B.A., B.S., M.A. |
| Division of Personnel | Miles T. Dean, B.S., M.A. |
| Division of Public Health Nursing | Enid Mathison, R.N., M.P.H. |
| Bureau of Dental Health | Floyd H. DeCamp, D.D.S. |
| Assistant Director | Delmar R. Miller, D.D.S., M.P.H. |
| Bureau of Entomology | John A. Mulrennan, B.S.A. |
| Entomological Research Center | Maurice W. Provost, Ph.D. |
| Bureau of Finance and Accounts | Fred B. Ragland, B.S. |
| Assistant Director | Paul R. Tidwell, B.B.A. |
| Purchasing Agent | Frank E. Craft, B.S.B.A. |
| Bureau of Laboratories | Nathan J. Schneider, Ph.D., M.P.H. |
| Assistant Director | Warren R. Hoffert, Ph.D., M.P.H. |
| Miami Regional Laboratory | Dwight E. Frazier, M.S. |
| Orlando Regional Laboratory | Max T. Trainer, M.S. |
| Pensacola Regional Laboratory | Emory D. Lord, Jr., M.S. |
| Tallahassee Regional Laboratory | Robert A. Graves, M.S., M.P.H. |
| Tampa Regional Laboratory | Justine L. McCurdy, B.S. (Acting) |
| West Palm Beach Regional Laboratory | Lorraine Carson |
| Bureau of Local Health Services | Elton S. Osborne, Jr., M.D., M.P.H. (Acting) |
| Assistant Director | Hubert U. King, M.D. |
| Division of Nutrition | Mildred Kaufman, B.S., M.S. |
| Division of Sanitation | A. W. Morrison, Jr., R.S. |
| Bureau of Maternal and Child Health | David L. Crane, M.D., M.P.H. |
| Bureau of Mental Health | Elton S. Osborne, Jr., M.D., M.P.H. (Acting) |
| Bureau of Preventable Diseases | |
| Assistant State Health Officer | C. M. Sharp, M.D. |
| Division of Epidemiology | E. Charlton Prather, M.D., M.P.H. |
| Division of Radiological and Occupational Health | Edwin G. Williams, M.D. |
| Division of Tuberculosis Control | Dwight Wharton, M.D. |
| Division of Veterinary Public Health | James B. Nichols, D.V.M. |
| Bureau of Research | |
| Assistant State Health Officer | Albert V. Hardy, M.D., Dr.P.H. |
| Bureau of Sanitary Engineering | David B. Lee, M.S.Eng. |
| Assistant Director | Sidney A. Berkowitz, M.S. Eng. |
| Division of Industrial Waste | Vincent D. Patton, M.S.S.E. |
| Division of Special Services | Charles E. Cook, C.E. |
| Division of Water Supply | John B. Miller, M.P.H. |
| Division of Waste Water | Ralph H. Baker, Jr., M.S.S.E. |
| *Bureau of Special Health Services | Malcolm J. Ford, M.D., M.P.H. (Acting) |
| Division of Chronic Diseases | J. E. Fulghum, M.D. |
| Division of Hospital and Nursing Homes | C. L. Nayfield, M.D., M.P.H. |
| Bureau of Vital Statistics | Everett H. Williams, Jr., M.S.Hyg. |
| Division of Data Processing | Harold F. Goodwin |
| Division of Public Health Statistics | Oliver H. Boorde, B.S., B.A. |
| Division of Vital Records | Charles H. Carter |

* This bureau was abolished late in 1965 and the two divisions were raised to bureau status.

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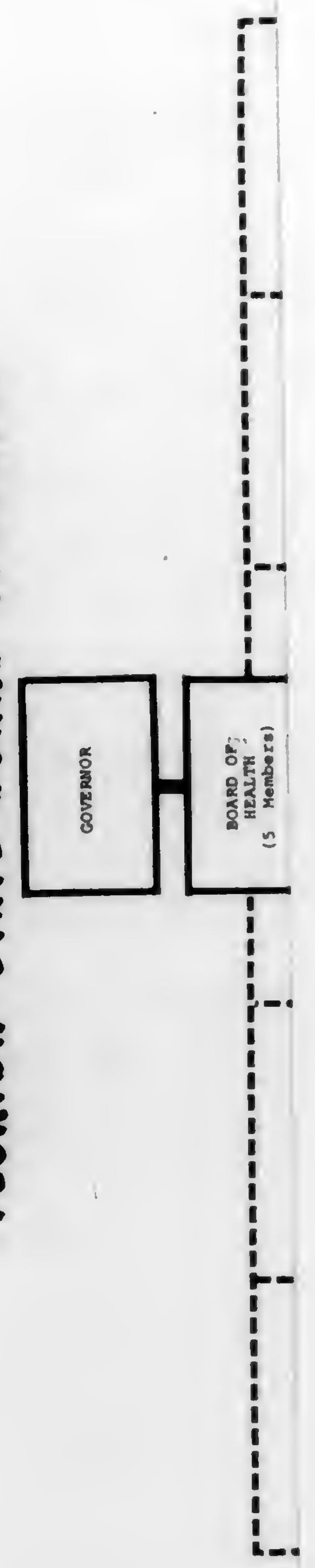
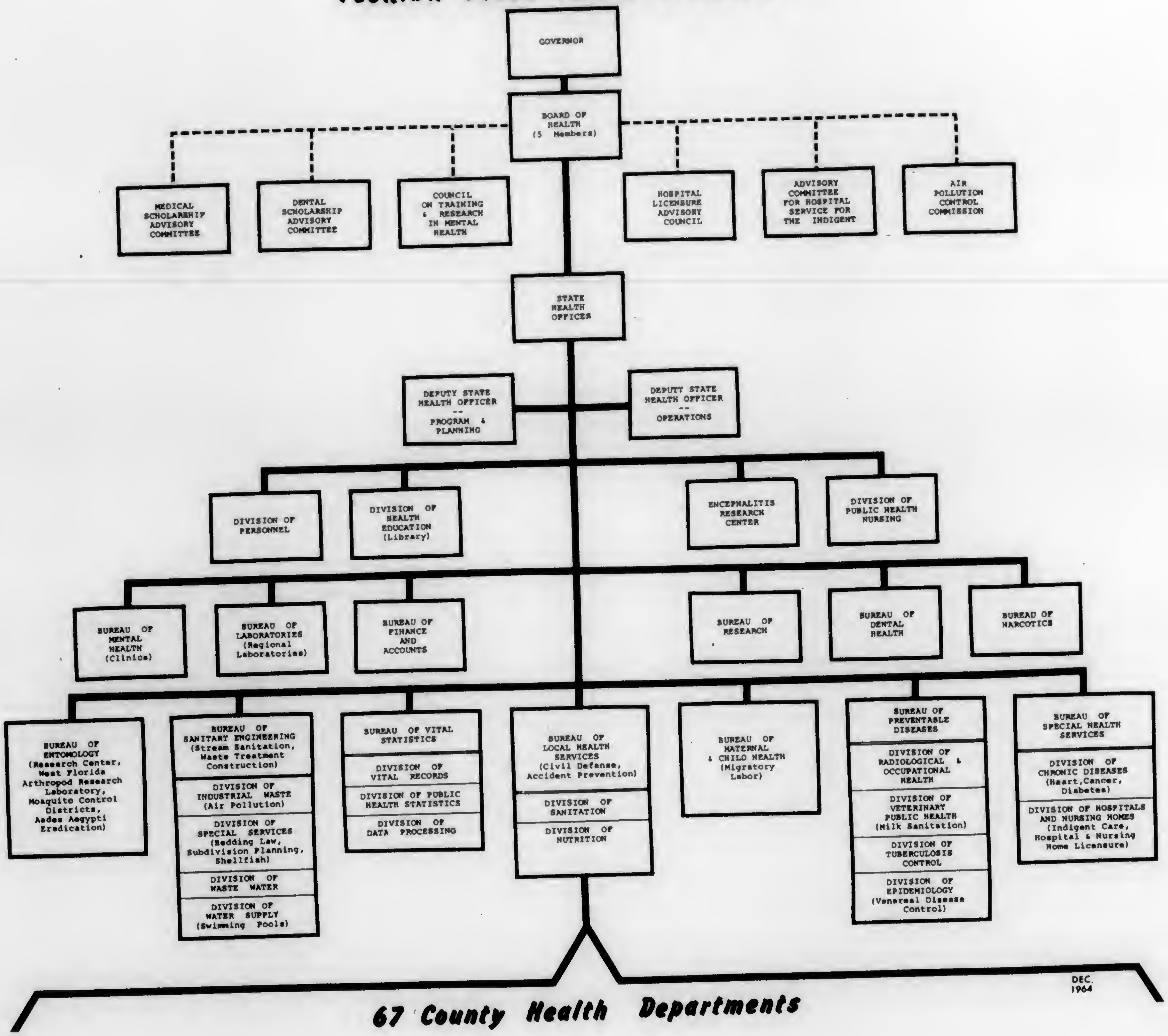


# ORGANIZATIONAL CHART OF THE FLORIDA STATE BOARD OF HEALTH


GOVERNOR
BOARD OF HEALTH (5 Members)
MEDICAL SCHOLARSHIP ADVISORY COMMITTEE
DENTAL SCHOLARSHIP ADVISORY COMMITTEE
COUNCIL ON TRAINING & RESEARCH IN MENTAL HEALTH
HOSPITAL LICENSURE ADVISORY COUNCIL
ADVISORY COMMITTEE FOR HOSPITAL SERVICE FOR THE INDIGENT
AIR POLLUTION CONTROL COMMISSION
STATE HEALTH OFFICER
DEPUTY STATE HEALTH OFFICER -- PROGRAM & PLANNING
DEPUTY STATE HEALTH OFFICER -- OPERATIONS
DIVISION OF PERSONNEL
DIVISION OF HEALTH EDUCATION (Library)
ENCEPHALITIS RESEARCH CENTER
DIVISION OF PUBLIC HEALTH NURSING
BUREAU OF MENTAL HEALTH (Clinics)
BUREAU OF LABORATORIES (Regional Laboratories)
BUREAU OF FINANCE AND ACCOUNTS
BUREAU OF RESEARCH
BUREAU OF DENTAL HEALTH
BUREAU OF NARCOTICS
BUREAU OF ENTOMOLOGY (Research Center, West Florida Arthropod Research Laboratory, Mosquito Control Districts, Aedes Aegypti Eradication)
BUREAU OF SANITARY ENGINEERING (Stream Sanitation, Waste Treatment Construction)
DIVISION OF INDUSTRIAL WASTE (Air Pollution)
DIVISION OF SPECIAL SERVICES (Bedding Law, Subdivision Planning, Shellfish)
DIVISION OF WASTE WATER
DIVISION OF WATER SUPPLY (Swimming Pools)
BUREAU OF VITAL STATISTICS
DIVISION OF VITAL RECORDS
DIVISION OF PUBLIC HEALTH STATISTICS
DIVISION OF DATA PROCESSING
BUREAU OF LOCAL HEALTH SERVICES (Civil Defense, Accident Prevention)
DIVISION OF SANITATION
DIVISION OF NUTRITION
BUREAU OF MATERNAL & CHILD HEALTH (Migratory Labor)
BUREAU OF PREVENTABLE DISEASES
DIVISION OF RADIOLOGICAL & OCCUPATIONAL HEALTH
DIVISION OF VETERINARY PUBLIC HEALTH (Milk Sanitation)
DIVISION OF TUBERCULOSIS CONTROL
DIVISION OF EPIDEMIOLOGY (Venereal Disease Control)
BUREAU OF SPECIAL HEALTH SERVICES
DIVISION OF CHRONIC DISEASES (Heart, Cancer, Diabetes)
DIVISION OF HOSPITALS AND NURSING HOMES (Indigent Care, Hospital & Nursing Home Licensure)
67 County Health Departments

DEC.
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## TENURES OF STATE HEALTH OFFICERS

J. Y. PORTER, M.D., 1889-1917
W. H. COX, M.D., 1917-1919
R. N. GREENE, M.D., 1919-1921
R. C. TURCK, M.D., 1921-1925
B. L. ARMS, M.D., 1925-1929
HENRY HANSON, M.D., 1925-1935
W. A. McPHAUL, M.D., 1935-1939
A. B. McCREARY, M.D., 1939-1940
W. H. PICKETT, M.D., 1941-1942
HENRY HANSON, M.D., 1942-1945
W. T. SOWDER, M.D., 1945*-
A. V. HARDY, M.D., 1961-1962 (Acting)
W. T. SOWDER, M.D., 1963-

* On leave October 1961 to December 1962

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# GENERAL ADMINISTRATION

WILSON T. SOWDER, M.D., M.P.H.
State Health Officer

*Nineteen sixty-five* may be long remembered as the year that gave birth to large scale, far reaching medical care programs. Unfortunately, with the onset of Medicare and other massive federal health programs, one of the most difficult problems to face the State Board of Health (SBH) this year was the grave loss of so many key personnel. Among those resigning or retiring this year were the following: Miss Elizabeth Reed, Director of the Division of Health Education, Dr. Edward L. Flemming, Assistant Director of the Bureau of Mental Health, Dr. L. L. Parks, Assistant State Health Officer and Director of the Bureau of Local Health Services, and Dr. Simon D. Doff, Assistant State Health Officer and Director of the Bureau of Special Health Services.

To make matters worse, while we are faced on the one hand with a loss of experienced, key personnel, on the other hand we are having great difficulty in hiring bright, well trained young people who can be groomed to assume positions of leadership. A prime reason for this is our low current pay scale. Because of the vital and highly complex duties assigned to the SBH, we must rely on educated specialists from a multitude of disciplines; yet we must attempt to hire these people at salaries that are less than attractive. One survey completed this year showed that we are attempting to hire college graduates in engineering at a salary range that pays $162 a month less than the current industry average. As a result, we have a number of engineering positions open, with no applicants interested in filling them. Everyone agrees that clear air and pure water is vital to our state, but expanding environmental engineering problems combined with a shortage of personnel is creating a difficult situation for this bureau. Florida can have air as clean as it wishes and water as pure as it wants, but there is a price tag on both and it has to be met.

While personnel shortage is a vital problem to our Bureau of Sanitary Engineering, it is by no means confined to that unit. This is probably our greatest handicap, and it is common throughout the agency. For instance, we are offering this year's graduate in business administration $130 a month less than the industry average; the liberal arts major $141 less; the chemistry major $147 less, and so on. What with more and more health programs made possible through federal funds and made necessary by an enlarging population in Florida, by the increase of state tourism, and by the growth of industry, our need for new, highly trained public health personnel is urgent and critical.

On the other hand a number of important advances were made in 1965. The year saw the establishment of a State-Local Relationships Study Committee. The difficult and important assignment of this committee is to study the organizational structure and relationships of county health departments (CHD) and the SBH as they relate to the effective provision of public health services throughout Florida. The committee is also examining the legal, administrative, fiscal, consultative and cooperative aspects of state-local relationships in light of current and future health needs as they are affected by population, political and economic factors in Florida. This is a large order, but we hope the results of this study will serve as valuable guidelines for future state-local relationships.

This year, for the first time in the history of reportable diseases in Florida, not one case of poliomyelitis was identified. It appears that this terrible childhood disease is finally on the threshold of total eradication from the state and nation. Unfortunately, it continues to rage in other portions of the world, so we must not let up on our efforts for total immunization.

We are not succeeding as well in our attempts to eradicate syphilis from the state. In fact, the number of early infectious syphilis cases reported increased again this year, as has been the trend since 1959. It is becoming evident that a well informed public is necessary for the control of this disease, so we are intensifying our efforts at public information and education in this important area.

With Florida maintaining its popularity as a retirement state, we must pay a good deal of attention to heart disease, cancer, stroke and other chronic diseases. It is estimated that about 21 per cent of our population is now over 55 years of age, and chronic disease — of one sort or another — is responsible for most of the hospital admissions in the state. In addition to maintaining active programs in cancer, diabetes and heart disease, one of our newer programs is in prevention of blindness (glaucoma). This disease is the second most common cause of blindness in Florida, and we estimate that more than 40,000 people over 40 years of age may have glaucoma. To date, more than 61,000 persons have been screened for glaucoma, and over 1568 of these were referred to ophthalmologists for diagnosis. In most of these cases, the disease was discovered before extensive damage was done.

As for radiation hazards, this was our first full year as an Atomic Energy Commission Agreement State (which means we have agreed to assume certain regulatory activities from the AEC), and as a result we have increased activity in licensing and use of radionuclides in medicine, industry and research. To date, 6300 radiation-producing machines have been registered, and we have, of course, continued all of our radiation surveillance activities.

We made some fine progress in dental health this year, with that bureau participating in a number of Head Start Projects and other special dental projects conducted about the state by local dentists. Also, a total of 35 fixed dental clinics were operated in 27 counties this year, serving underprivileged expectant mothers as well as underprivileged children.

In veterinary public health we continued our study, surveillance and control of animal diseases that are transmissible to man. In this area, it's cheering to note that only 78 cases of rabies were confirmed in animals this year. This is a decline over the annual rate for the past two years.

Not so cheering is the fact that our Bureau of Entomology has discovered that salt-marsh mosquitoes seem to be developing a resistance to Malathion, heretofore our most effective adulticide in mosquito control. It looks as if we are going to have to search for another pesticide to destroy resistant adult mosquitoes. In addition, this discouraging note comes at a time when personnel loss is badly hampering the activities of this bureau.

These, then, are some of our problems and some of our successes of 1965 — the good and bad of it. It has been a year of large problems, but larger accomplishments. For a detail by detail look at the year, we commend to you this *Annual Report*.

### STAFF ASSISTANCE

The *internal auditor* plans, directs and coordinates the internal audit program of the SBH, including the 67 CHDs. He has one permanent assistant, and was provided with an additional accountant for four months during 1965. The internal auditor conducts post audits of the financial transactions of the agency to determine that fiscal matters are in accord with state and local laws and the policies of the SBH. Accounts of 34 CHDs were audited during 1965. Also, audit work papers were prepared on the accounts of six additional CHDs.

The *staff attorney* provides legal advice on problems related to administration and operations, and participates in the formulation of the agency's legislative and regulatory programs. He also maintains a distribution and supplementation service to over 700 recipients of the compiled SBH regulations. This is a limited service to those persons interested in the total program activity. Distribution of regulations to the general public is handled by the bureaus and divisions directly responsible for specific program activity.

There is a general trend of increased legal involvement in public health programs. Litigation involving regulations for the handling of dead bodies directly resulted in extensive technical studies of burial practices and subsequent revision of regulations on the subject.

The use of direct civil litigation, legal assistance to CHDs and administrative hearings have been the most successful methods of securing compliance of public health requirements when the noncompulsory methods of health education, consultation and persuasion have failed to correct violations. These have been utilized in the fields of air pollution control, trailer park permitting, nursing home and hospital licensure, and water pollution.

During 1965, the *press secretary* distributed 74 press releases to news media over the state; and various media were given assistance 136 times by supplying information to them or by setting up and aiding their representatives to obtain their own stories, photographs, radio or television interviews.

## PROGRAM PLANNING

MALCOLM J. FORD, M.D., M.P.H.
Deputy State Health Officer

This was the first full year of operation for the *Deputy State Health Officer for Program Planning.* He is charged with the coordination and administrative review of all grants-in-aid, project grants, contracts and cooperative agreements of the State Board of Health (SBH). The agency has received 11 grant-in-aid funds, and 39 special projects have been processed to date, as well as 10 projects awarded to other agencies and eight agreements signed by the SBH.

This officer also serves as the project director of a special pesticides study being conducted under a contract with the U.S. Public Health Service. Through studying the epidemiology and ecology relating to pesticides, combined with a statewide survey of pest control operators of morbidity and mortality and a consideration of laboratory services, this study hopes to determine the short and long term effects of pesticides on human health.

In addition to these duties, the Deputy State Health Officer for Program Planning conducted exhaustive reviews on the program content and administration of the Division of Health Education and the Bureau of Special Health Services; represented either the State Health Officer or the SBH on the Florida Commission on Aging, the Governor's Committee on Employment of the Handicapped and the Florida Joint Council on Health of the Aging; coordinated program information between the SBH and the Governor's Office of Economic Opportunity; and served as acting director of the Bureau of Special Health Services. Mr. J. N. Conger, Health Program Analyst on this staff, served as acting director of the Division of Health Education.

## OPERATIONS

ELTON S. OSBORNE, Jr., M.D., M.P.H.
Deputy State Health Officer

In this first full year of operation also, *the Deputy State Health Officer for Operations* performed a most important function in working with the State Board of Health (SBH) Division of Personnel and the Florida Merit System. It is believed that a better working relationship between this agency and the Merit System has been achieved as a result.

Beyond serving as acting director of the Bureau of Mental Health and as acting director of the Bureau of Local Health Services, the Deputy State Health Officer for Operations represented the State Health Officer at Merit System Council meetings, the Conference of Directors of State Agencies and the Annual Conference of the Surgeon General with the State and Territorial Health Officers. This position also assumed the supervision of the staff attorney and the press secretary of the SBH.

## ACTIVITIES OF THE BOARD

*February 7 — Jacksonville*

1. Re-elected Eugene G. Peek, Jr., M.D., as President of the Board and Mr. T. M. Cumbie as Vice President.
2. Approved the appointment of Mr. Louis O. Frost, Jr., as Counsel to replace Mr. Carlton Maddox.
3. Discussed a study by a committee set up for the purpose of careful scrutiny of the regulations in the handling of dead human bodies.
4. Discussed the problem of dual licensure of hospitals and nursing homes.
5. Approved the recommendation of the Board of Governors of the Florida Medical Association that the referral of cancer patients on the Medical Assistance to the Aged Program to Tumor Clinics not be required by the State Board of Health (SBH) and that such patients have the privilege of retaining their private physician.
6. Approved in principle Standards and Operating Procedures for Family Planning Services and a Guide for County Health Departments (CHD).
7. Discussed the purchase of mental health drugs and authorized the use of county health unit at large funds through June 30, 1965, for this purchase up to the amount of $50,000.
8. Approved amendments to Chapter 500 — Food, Drug, Cosmetic and Devices Act for submission to the Legislature.
9. Approved amendments to the Uniform Narcotic Drug Law for submission to the Legislature.
10. Disapproved proposal set forth by the Florida Air Pollution Control Commission to amend Chapter 403 for the purpose of bringing the entire state under the control of the Commission and any provision for rules and regulations to be adopted solely by the Commission.

11. Approved a resolution submitted by the Pinellas County Board of Health for the transfer of $40,000 from the Pinellas County Health Unit Fund to the Pinellas County Anti-Mosquito Control Program.
12. Discussed the Italian Broadsides found among the records of the SBH and advised Dr. Sowder to keep the originals and send copies to the Smithsonian Institute in Washington.
13. Discussed the donation of a surplus airplane to the State Board of Health by the Brevard Mosquito Control District to be used in the research program in the distribution of insecticides to control mosquitoes and dog flies.

*April 24 — Miami Beach*

1. Discussed the Agreement on Civil Rights.
2. Discussed the Community Medicine Study being carried on by the University of Florida and designated the State Health Officer to personally handle all relationships with the University with regard to any cooperative arrangements involving the SBH and the CHDs.
3. Discussed the status of a proposed bill which would separate the Dade CHD from the SBH.
4. Discussed the appointment of a committee to study the various phases of CHD operations and asked the State Health Officer to submit names of possible members to the Board at a later meeting.
5. Discussed the policy regarding physicians employed in the central office engaging in private practice outside of the SBH and reiterated their long standing policy that physicians employed by SBH not be allowed to engage in private practice.
6. Approved seven candidates for medical scholarships recommended by the Advisory Committee on Medical Scholarships.
7. Adopted a statement regarding the SBH's position regarding the placement of the Mental Health Program of the SBH under another state agency as proposed by legislation.
8. Approved amendments to regulations on septic tanks, Chapter 170C-4.
9. Approved a policy whereby SBH staff not be allowed to issue permits that are in conflict with local laws or ordinances unless such action is required by the results from a pending court case, or by a legal opinion from the Attorney General's Office.

10. Approved amendments to the Bedding Law to be submitted to the Legislature.
11. Approved amendments to the Structural Pest Control Law to be submitted to the Legislature.
12. Approved the submission of a deficiency appropriation bill regarding Tampa Laboratory.
13. Approved candidates for Postgraduate Training.
14. Authorized the State Health Officer, who is the State Registrar of Vital Statistics, to settle questions of eligibility for the waiving of fees for particular organizations or individuals qualifying for free services under the general categories approved by the Board.
15. Referred the matter regarding the International Minerals and Chemical Corporation Plant in the Mulberry area to the Florida Air Pollution Commission for its action and recommended that a hearing be set for this matter by that group.

*April 25 — Miami Beach*

1. Discussed the action taken by the House of Delegates of the Florida Medical Association regarding the Mental Health Program and the Indigent Hospitalization Program.

*June 13 — Jacksonville*

1. Approved the appointment of Mr. Charles Carter as the director of the Division of Vital Records in the Bureau of Vital Statistics.
2. Approved the appointment of Miss Mildred Kaufman as director of the Division of Nutrition.
3. Accepted the resignation of Simon Doff, M.D., as director of the Bureau of Special Health Services.
4. Accepted the information on the resignation and retirement of Miss Elizabeth Reed, director of the Division of Health Education.
5. Discussed proposed rules concerning the transportation, storage and disinterment of human bodies and postponed action until further study.
6. Heard a report on the Civil Rights Agreement with respect to hospitals receiving federal funds in Florida and the necessity of their compliance by September 1, 1965.
7. Discussed proposed revisions of Chapter 170C-10, Garbage and Rubbish and a proposed section dealing with pathological waste. Postponed action until consultation with the Florida Hospital Association regarding this matter could be arranged.

8. Approved the purchase of the property on Pearl Street, Jacksonville, immediately by the State Health Office out of the funds provided for this in the Legislative Budget.
9. Heard a report by Mr. Fred B. Ragland on legislation affecting the SBH.
10. Approved the release of funds from the Lake County Health Unit Fund in the amount of $1800 for the completion of the Clermont Health Center.
11. Heard a report by the State Health Officer on the effect of the legislation regarding the transfer of the Mental Health Program to a separate agency.
12. Approved an extension for postgraduate training for Robert S. Wright, Sanitary Engineer.
13. Discussed the dedication of the Pensacola Laboratory Building which is to be held some time in August.
14. Discussed a report from the Florida Medical Association's Board of Governors with reference to the medical scholarship program.
15. Approved the use of state monies in the amount of $30,000 for use in the counties in the Vaccination Assistance Program.
16. Discussed the use of architectural firms for the construction of the new building in Jacksonville.
17. Approved a leave of absence without pay for Albert B. Hardy, M.D., up to three months.

*August 1 — Jacksonville*

1. Approved revisions of regulations in Chapter 170E-7, Transportation, Storage and Disinterment of Dead Human Bodies.
2. Heard reports from Dr. Hardy and Nathan J. Schneider, Ph.D., regarding the status of the Encephalitis Program.
3. Approved revisions in Chapter 170C-9 — Air Pollution.
4. Discussed the law on phenylketonuria (PKU) testing passed by the Legislature and possible programs to be carried out because of its passage.
5. Discussed rules and regulations of the State Board of Cosmetology.
6. Developed a statement of policy regarding salary supplementation and asked the State Health Officer to circulate it to all employees of the SBH and the CHDs.
7. Established a policy whereby all printed pamphlets, booklets, etc., by the SBH contain the names of the Board Members and the State Health Officer in them.

8. Appointed Malcolm J. Ford, M.D., as acting director of the Bureau of Special Health Services.
9. Appointed a Committee on State-Local Relationships.

*October 3 — Jacksonville*

1. Discussion with the Florida Tuberculosis and Respiratory Disease Association officials regarding problems in the Hillsborough County area.
2. Revised certain sections of the recently approved regulations regarding Chapter 170C-9 — Air Pollution.
3. Heard a report from Leo M. Watchel, M.D., on a meeting held by the Advisory Committee on PKU.
4. Discussed proposed revisions of the Pest Control Regulations and postponed action until a further study could be made of these revisions.
5. Approved the appointment of members to the Advisory Committee on Hospitalization for the Indigent.
6. Appointed a Committee to assist the State Health Officer in seeking candidates for the position of director of the Bureau of Local Health Services.
7. Approved the appointment of Dr. Elton Osborne, acting director of the Bureau of Local Health Services.
8. Extended the time limitation for certain physicians not yet having secured their license and asked the State Health Officer to make a complete study of the problem.
9. Approved the expenditure of $6000 to investigate the possibility of cooperation of the SBH with the Florida Medical Association in the Salvador Parades Hospital Project in Trujillo, Honduras.
10. Discussed federal money to be available during the next year for a Home Health Services Program.
11. Discussed a proposed draft of a Multi-County Project and suggested that careful study be given this; and further that an advisory committee go over this proposal before being brought back before the Board.

*December 5 — Jacksonville*

1. Recognized the re-appointments of Dr. Peek, Dr. Wachtel and Mr. Cumbie as members of the Board for another four year term.
2. Abolished the Bureau of Special Health Services and created a Bureau of Chronic Diseases with James E. Fulghum, M.D., as director; and created a Bureau of Hospitals and Nursing Homes with Chester L. Nayfield, M.D., as director.

3. Approved revisions of the Pest Control Regulations.
4. Confirmed action taken by mail regarding the acceptance of an airplane from the Brevard County Mosquito Control District.
5. Approved only those regulations of the Board of Cosmetology which pertain to health and sanitation.
6. Approved a plan for the operation of a PKU Program within the SBH.
7. Approved the establishment of a central drug distribution program within the SBH and the employment of a pharmacist to handle this.
8. Inaugurated a measles vaccination program in conformance with existing policies of the SBH; such as the approval by the local medical society for the program in each county, the distribution of drugs to CHDs only; and the limitation or the use of vaccine by CHDs to indigents and medically indigent persons unless specific approval is obtained from the medical society for other groups.
9. Approved rules and regulations with reference to an amendment by the legislature of Chapter 170G-1, Drug, Cosmetic and Device Law.
10. Heard a report from Dr. Sowder on the trip to Trujillo, Honduras.
11. Discussed the employment of a physician to head up the Medicare Program.
12. Discussed the recent federal legislation passed regarding a Solid Waste Program.
13. Heard a progress report regarding the Home Health Services Program.
14. Approved the appointment of Senator Robert M. Haverfield as a member of the Advisory Committee on the Hospitalization for the Indigent.
15. Discussed possible methods of taking legal action regarding medical scholarship recipients.
16. Approved the appointment of Vincent Granell, Ed.D., as director of the Division of Health Education.

## ENCEPHALITIS RESEARCH CENTER

JAMES O. BOND, M.D., M.P.H.
Director

California encephalitis (CE) viruses assumed a role of major importance in the studies of the Encephalitis Research Center (ERC) during 1965. Identified first in California in 1943, and again in Florida in 1962, these arboviruses were considered relatively unimportant until recently. They are now the most frequently recovered mosquito-borne, viral agents in Florida. In the Tampa Bay area during 1965, 21 such recoveries were made; all from the *Aedes* genus of mosquitoes. Joint studies by the ERC virology laboratory and the University of Pittsburgh Laboratory identified two distinct serotypes; one was unlike any previously described and has been given the new name of Keystone virus. In addition to the isolation-identification of the CE viruses from mosquitoes, the two laboratories developed more precise serologic techniques for the diagnosis of infection in humans and other mammals. Two human cases were identified during 1965; both were children and both had probable exposure in North Carolina. Each recovered from a mild meningoencephalitis without apparent sequelae. Serologic surveys in the normal population indicate an inapparent infection rate with CE virus of five per cent.

The reservoir of CE viruses in nature is presumed to be a mammal rather than a bird. In the Tampa Bay area, very few of the mammals examined during 1965 demonstrated HI antibodies to CE virus. However, the rabbit, raccoon and squirrel were serologically implicated as possible reservoirs. Limited studies of the preferential feeding habits of *Aedes* mosquitoes in the Tampa Bay area indicate that mammals are a preferred source of blood and, of these, the rabbit, horse and cotton rat serve as frequent blood meals for these mosquitoes. Both field and laboratory studies are currently underway to describe further the epidemiology of this interesting group of arboviruses which is becoming increasingly important in Florida.

The major purpose of the ERC is to study the epidemiology of St. Louis encephalitis (SLE), but this was frustrated in 1965 by the virtual absence of this virus from the Tampa Bay environment. Serologic evidence indicated that cotton rats in Hillsborough County and backyard chickens in Hardee County may have been infected with SLE virus sometime during the spring of 1965. Despite intensive studies, however, no further evidence of SLE virus activity was detected. The volume of material collected for viral surveillance in 1965 exceeded any previous year. Specimens tested for SLE virus, either by serology or viral isolation, included over 175,000 mosquitoes, 2832 wild birds, 747 sentinel chickens, 205 backyard chickens, 52 horses, 531 mammals, 419 human central nervous system (CNS) surveillance cases and 398 human serologic survey specimens.

Significant positive contributions to our knowledge of SLE epidemiology included a better understanding of the interpretation of human serologic responses to SLE antigens used in the hemagglutination-inhibition laboratory test. The University of Pittsburgh, cooperating with ERC, found that old dengue infections, particularly in the Hillsborough and Manatee County areas, caused considerable overlap in the immunological response measured by SLE antigens. A better interpretation of both the epidemiology and serology of SLE infections in humans in the Tampa Bay area is now possible. Follow-up studies of earlier SLE cases continued in conjunction with the National Institute of Child Growth and Human Development Study Center in St. Petersburg. Significant, residual, emotional instability in the old SLE patients was again demonstrated, although some improvement was evident.

Although no SLE virus was identified in the mosquitoes during 1965, continued studies added new knowledge on the habits of the proven vector, *Culex nigripalpus*. Host preference studies verified the suspected ubiquitous feeding habits of this mosquito. Donkeys, chickens, cotton rats and even box turtles were fed upon. Birds, however, are apparently the preferred host. Carbon dioxide, in combination with either chicken bait or light, was a powerful additional stimulant toward attracting these mosquitoes into traps. Very preliminary studies showed some correlation between the adult density of *C. nigripalpus* in the summer months and the levels of ground water. An artificial colony of this species was established in an insectory and maintained throughout the year.

The possible vertebrate reservoir(s) of SLE virus in the Tampa Bay area are varied. In laboratory infection experiments, the mockingbird was found capable of maintaining a viremia long enough to be a potential wild reservoir. Other species with this same potential include the chicken, dove and sparrow. Population studies, by ornithologists, demonstrated that urban environments favor an increased prevalence of such species as the dove, sparrow and pigeon. In contrast, swamp environments completely lack these species of birds and have a lower density of birds in general. This has important implications in the future epidemiology of SLE in Florida.

New, unidentified viruses present an interesting challenge to the virology and biology sections of ERC. In the Big Bend area of Hillsborough County, over 900 rodents have been collected in a three year period, 360 of these in 1965. Viral agents have been recovered from cotton rats in each of the three years; two during 1965. Attempts to identify these agents, both in the ERC and the University of Pittsburgh, have so far been unsuccessful. Four additional tick agents, also recovered in 1965, are undergoing further identification tests at the University of Pittsburgh. Other unidentified viruses from the Big Bend area have apparently occurred in *C. nigripalpus* mosquitoes. These findings give high importance to the continuing studies in this particular small area of Hillsborough County, although the medical and public health significance of the findings cannot be assessed at the moment.

Significant new observations or activities of the various sections of the ERC during 1965 were as follows. In the human surveillance program, studies of systemic viral infections, in addition to CNS viral infections, were initiated in midyear. Etiologic diagnoses, which were either new or unusual, included mycoplasma pneumoniae, herpes simplex, ECHO 7, and parainfluenza 3. Western encephalitis (WE) antibodies were detected in two humans; however, these were acquired from previous infection outside of the state of Florida. An unusual prevalence of Group B arbovirus antibodies in patients referred by neurosurgeons for viral diagnostic studies was observed in Hillsborough County. Special serologic surveys for EE, WE, SLE and CE arbovirus antibodies were carried out in children in the Sunland Training Hospital, Orlando, the MacDonald Training Center, Tampa, and in old cases of epidemic neuromyasthenia in Punta Gorda. No significant antibodies to those arboviruses were observed. The virology laboratory embarked on a new program of producing arbovirus antigens and antisera which involved an expenditure of an unusual amount of time and resources. The entomology section instituted new programs or experiments to study host-feeding preferences of mosquitoes, and the attractant efficiency of various types of collecting devices. An insectory was established for artificial rearing of mosquito colonies. The biology section instituted new, large-scale studies of migratory birds, both in the Tampa Bay area and on the southern most tip of Florida in the Dry Tortugas Islands. In conjunction with ornithologists from the University of South Florida, a large program of banding and bleeding members of the heron families throughout south Florida was initiated.

## TRAINING COORDINATION

ROBERT V. SCHULTZ, M.D., M.P.H.
Coordinator of Training

This activity is within the office of the State Health Officer. It functions under the general direction of the Deputy State Health Officer for Operations and its activities are primarily concerned with providing assistance in planning and conducting meetings, seminars, symposia, workshops and other forms of in-service training; with administrating the academic training program; with arranging for short and long term courses and other training programs supported by grants from the United States Public Health Service (USPHS) or other sources, and with the conduct and administration of the special programs listed below.

### Student Traineeship Program

For a number of years, Florida residents who are medical, dental, veterinary, sanitary engineering, graduate science or undergraduate students, have been employed for a period of three months in the State Board of Health (SBH) or county health departments (CHD), to assist in ongoing projects which are related to the student's indicated interest in these fields. Selection is based on financial need and the students' potential for continuing careers in public health. To this end, they receive special training and supervision designed to acquaint them with the inter-relationships and overall functions and activities of the SBH and CHDs. Most students are employed during the summer months, but the program is not restricted to this period.

In 1965, there were 177 applications for this program. Of these, 54 were selected for employment at the central office and in the regional laboratories of the SBH, the several regional offices of the Bureau of Sanitary Engineering, the Encephalitis Research Center in Tampa and divisions or activities of the following counties: Brevard, Dade, Duval, Hillsborough, Leon, Marion, Orange, Palm Beach, Pinellas and Polk.

### SCHOLARSHIPS FOR PROFESSIONAL EDUCATION

The scholarship programs created by the 1955 Florida State Legislature for the study of medicine, dentistry and the several disciplines concerned with mental health were continued.

Scholarships for the study of medicine were awarded based on the recommendation of a seven-man advisory committee authorized by law. The seven members were: David W. Goddard, M.D., Chairman, Daytona Beach; James T. Cook, Jr., M.D., Marianna; John C. Finerty, Ph.D., Associate Dean of the School of Medicine, University of Miami, Miami; E. B. Hardee, Jr., M.D., Vero Beach; Hugh M. Hill, M.D., Assistant Dean for Students, College of Medicine, University of Florida, Gainesville; Homer L. Pearson, Jr., M.D., Executive Director, Florida State Board of Medical Examiners, Miami; and Arthur J. Wallace, M.D., Tampa.

As authorized by the Legislature in 1959, one scholarship was awarded for the study of osteopathic medicine. The recipient was recommended by the State Board of Osteopathic Medical Examiners.

Scholarships for the study of dentistry were awarded by the SBH upon the recommendations of the State Board of Dental Examiners.

Scholarships in the several disciplines of mental health were awarded upon the recommendations of the Florida Council on Training and Research in Mental Health.

Through the Federal Social Security Act of 1935, the SBH receives federal funds which are used to provide scholarships for its employees and those in affiliated CHDs for specialized professional training. These scholarships are awarded to career employees who evidence a potential for growth and service in specialized areas of public health.

#### MEDICAL

Scholarships Awarded in 1965:

| | |
|---|---|
| | Broward |
| **Gordon Charles Finlayson | Orange Park |
| Louis B. St. Petery | Ft. Lauderdale |
| Monica Anne Minyard | Gainesville |
| William Clark Morgan | Hollywood |
| *Donald L. McBath | Pompano Beach |
| George L. Sanders | Tallahassee |
| Julia Carolyn Revell | Tallahassee |
| Harrison Denison Williams | Miami |
| Wayne Raymond Johnson | |

Continuing Scholarships Awarded Prior to 1965:

Awarded 1962:

Richard Julian Bagby
Leonard Channing Bass
*Lloyd Dale Gauvin
Joseph William Haddock
Donald Gammon Hall
Gordon David Onstad
Laurie Miles Pardee
Richard Thomas Roby, Jr.
Howard Todd Wilson

Awarded 1964:

***Daniel Leslie Benboe
**Clarence M. Harris III
Jack Benson Owen
Elena Suzanne Rose
*Orville Leon Barks, Jr.
James Patrick O'Leary
Elizabeth Orene Vaughan
Charles Edward Walbroel
Rosetta Mae Bush
Edmond Delaney Roinson

Awarded 1963:

Kenneth L. Beckett
Calvin Collins, Jr.
**Beatrice Alfreda Denefield
Samuel Boykin Hunter
Ronica Mahoney Kluge
Bodo Eidel Pyko
Kathleen Mary Santi
Ira Harmon Wenze
Phillip Eugene Wright

*Osteopathic scholarship
**Scholarship surrendered
***Dropped from school

#### DENTAL

Scholarships Awarded in 1965:

| | | | |
|---|---|---|---|
| Melvin C. Beard II | Escambia | David W. Rawson | Santa Rosa |
| Albert J. Endruschat | Dade | John L. Ricks, Jr. | Jackson |
| Richard L. Finkbeiner | Polk | Drew H. Turner, Jr. | Duval |
| Nathan A. Graddy | Polk | Richard H. Waldbart, Jr. | Hillsborough |
| Leonard W. Peterson | Monroe | John W. Shannon | Duval |

Continuing Scholarships Awarded Prior to 1965:

Awarded 1962:

George W. Boring, Jr.
**James V. Ferdinand
William W. Motley, Jr.
Alvan C. Smith
Emory T. Cain

Awarded 1963:

John F. Bembry
***Norman M. Bevan, Jr.
Frederick A. Booth, III
**Robert L. Ferdinand
Anthony B. Frilingos
George D. Sanchez
Michael R. Kennedy

Awarded 1964:

Wayne D. Bradley
Roger E. Gibson
***Charles L. Graves III
James R. Hoover
Ronald J. Marien
Conrad A. Mora
James E. Owens
William A. Thompson

**Scholarship surrendered
***Dropped from school

### PUBLIC HEALTH PERSONNEL

| | | |
|---|---|---|
| Ernestine S. Boswell | Public Health Nurse II | Duval |
| Collette Davidson | Public Health Nurse Supvr. I | Dixie |
| Martha V. Long | Asst. County Nurse Director | Hillsborough |
| Doris B. Jones | Public Health Nurse I | Manatee |
| M. H. Speakman | Public Health Nurse II | Highlands |
| Vernon Buttram | Health Field Worker II | SBH |
| Oliver H. Boorde | Chief — PH Statistics | SBH |
| Leroy C. Doughty | Sanitary Engineer III | SBH |
| C. W. Sheffield | Sanitary Engineer III | Orange |
| R. S. Wright | Sanitary Engineer IV | SBH |
| O. J. Baker | Sanitarian IV | Broward |
| James Walter Mason II | Sanitarian | Brevard |
| Harry Zarcadoolas | Sanitarian I | Dade |
| James L. Hulbert | Sanitarian | Orange |

### MENTAL HEALTH

#### Clinical Psychology

| | |
|---|---|
| Marjorie A. Bayes | Miami |
| Carol W. Cardoza | Miami |
| William T. Dillon | St. Petersburg |
| Steven P. Rievman | Miami |
| Dorothy B. Ward | Gainesville |

#### Psychiatric Nursing

| | |
|---|---|
| Alice B. Atkins | Miami |
| Sandra H. Swicord | Gainesville |
| Shirley M. Bloodworth | Gainesville |

#### Psychiatric Social Work

First Year:

| | |
|---|---|
| Gerald J. Buchert | Port St. Joe |
| Gail Dee Chadwick | Sarasota |
| David F. Dillon | West Palm Beach |
| Joseph R. Dills | Jacksonville |
| Jack I. Knight | Winter Haven |
| Joan Kogelschatz | Inverness |
| Ruth McCartt | Chattahoochee |
| Jan C. McGurk | Miami |
| Marian Schneider | Opa Locka |
| Richard J. Sheldon | Tallahassee |
| A. Julius Sontag, Jr. | Tallahassee |
| Donald F. White | Jacksonville |
| Catherine L. Zulauf | Rockledge |

Second Year:

| | |
|---|---|
| John W. Terlouw | Tallahassee |

### Florida Program for Residency Training in Public Health

The Council on Medical Education, American College of Preventive Medicine, has approved the Florida program and the following five Florida CHDs for residency training in public health: Dade, Alachua, Hillsborough, Pinellas and Palm Beach.

This residency in public health offers qualified physicians one year of postgraduate training and up to two years of indoctrination under the guidance of the director of the CHD to which the resident is assigned, in preparation for recruitment in public health activities in Florida. It is jointly administered by the Council and by the coordinator, who for this purpose, is designated as program director by the State Health Officer and functions in this capacity under his supervision.

John J. Woodward, M.D., completed his first year as Resident in Public Health in Hillsborough County, October 1, 1965.

The coordinator assists the Division of Health Education in program planning and evaluation of a four and one half day orientation course for new employees. (See Division of Health Education elsewhere in this report.)

He provides individual orientation for trainees from the USPHS and other agencies, small group orientation for special guests and dignitaries from other sections of the United States or from foreign countries who are visiting the SBH.

The coordinator is responsible for appropriate distribution of information brochures, pamphlets and announcements concerned with training available in all parts of the United States. The SBH assumes no responsibility or obligation to provide for fees, per diem or travel, incident to attendance. This is considered a matter for local decision by the directors of the departments concerned. For reference purposes this office maintains a file of catalogues of Schools of Public Health, other institutions, and USPHS publications concerned with training.

In addition, the coordinator is currently assisting the Bureau of Local Health Services in recruitment and was appointed by the State Health Officer to represent the SBH on the Health Task Group on State Emergency Resource Management Plans (Civil Defense).

## DIVISION OF HEALTH EDUCATION

**ELIZABETH REED, R.N., B.S.**
**Director (to May 14)**

**J. N. CONGER, M.P.H.**
**Acting Director (May 14 to December 1)**

**VINCENT GRANELL, Ed.D.**
**Director (from December 1)**

As in the past, the division continues to serve all other bureaus and divisions, county health departments (CDH), voluntary health agencies, PTAs, public and parochial schools, health-related professions and the general public. Thirteen health educators are employed in CHDs, with four more positions vacant. There is an acute need for more health educators as many CHDs are considering adding such a position to their budgets.

### Audio-Visual Library

In 1965 the Audio-Visual Library continued its steady growth. Circulation, as well as the number of booking orders processed, reached an all-time high. The number of films and other aids circulated increased 19.8 per cent, for the first time going over the 10,000 mark. The actual figure was 10,465 compared with 8748 in 1964. The number of booking orders processed increased 13.7 per cent. The number of times all aids were used showed a marked increase. In 1964 they were used 17,935 times compared with 21,326 in 1965, an 18.9 per cent increase. The number of times equipment was used outside the Audio-Visual Library increased from 287 in 1964 to 317 in 1965, an increase of 10.4 per cent.

The use of motion pictures alone increased 20.5 per cent. In 1964, 8438 prints were circulated compared with 10,072 in 1965. The use of all other aids combined also showed an increase, but of all audio-visual aids motion pictures accounted for about 97 per cent of the circulation with slides, filmstrips and tape recordings comprising the remaining three per cent.

One film was televised to an estimated audience of 3400 persons. Seven television spot announcements were booked. Eleven 35 mm tuberculosis trailers were shown approximately 92 times.

Forty-nine prints of motion pictures were removed from circulation because of obsolescence or damage. Two other aids were removed because of damage. Two motion pictures and one filmstrip were lost in transit.

Inventory as of January, 1966 included 1242 prints of motion pictures. There were 563 separate titles and 255 other aids. Purchases consisted of 93 prints of motion pictures. No equipment was purchased. A catalog and a supplement were printed and distributed during the year. A circulation survey was compiled, printed and distributed.

### Medical Library

New books added in 1965 totaled 1312, while 686 outdated or worn-out volumes were withdrawn bringing the total number of books and bound journals in the collection to 21,548 on December 31. The vertical file of unbound material was increased by the addition of 940 pamphlets.

By far the most extensive use of the library was made by the personnel of the State Board of Health (SBH) in Jacksonville and those in the CHDs. The number of loans made to the libraries of the Jacksonville Hospitals Educational Program was next. Local physicians, nurses, lawyers and students also were borrowers.

Of the 2555 books checked out, 752 were issued on indefinite loan. Journals circulated both in Jacksonville and out-of-town numbered 10,059. Day loans (books and journals used in the library) came to a total of 2446. Other statistics included 97 inter-library loans, 34 bibliographies compiled and 1666 photocopies made.

In 1965, the library continued to publish the leaflet, "Book Bulletin," which gives the titles of the new books received. This was circulated to SBH personnel, CHDs and other local libraries.

The library participated in the program of the Medical Library Association Exchange through which medical libraries may request the missing issues of journals and in return supply the needs of other libraries by mailing out its duplicates. The SBH library received 180 requests and was able to fill 135, of which 13 were from foreign libraries. This represents 2545 duplicates mailed.

### Pamphlets

The total amount of pamphlets distributed in 1965 was 324,475. The decrease from the 1964 distribution figures was due to the discontinuation of many pamphlets while others were being revised, reviewed or in the process of printing. The Spanish pamphlets were sent to the Dade County Department of Public Health for use.

A new procedure has been initiated to accumulate information on each pamphlet. A card is completed giving the following data: name of pamphlet, publisher and address, price, budget number of bureau or division financing purchase, number of copies ordered, date ordered and date delivered. The procedure will permit an intelligent answer to the purchaser who wishes to determine the effectiveness of a pamphlet.

Based on requests, there is need for more pamphlets on child growth and development, sex education, good grooming, caloric charts, careers, insects, water pollution, air pollution, bacteria and viruses.

### Publications, Radio and Television

The circulation of the *Florida Health Notes* (published 10 months a year) continued to climb in 1965 with 20,500 copies a month being printed. Subjects covered in 1965 were: air pollution, mental health, dental health, day care centers for children, the *Aedes aegypti* Eradication Project, health of migrant laborers, smoking and health, nursing homes, a condensation of an environmental health survey of Gainesville and a condensed annual report.

Monograph Number 8, *Developmental Evaluation Clinic*, was published. Assistance was given to the editing and publishing of

40 other books and pamphlets, as well as the *Annual Report*. Including slides, over 158 photographic assignments were completed.

Approximately 200 radio stations received 37 new spot announcements on various health topics. Filmed spot announcements on general immunization and measles prepared by the Federal Government were received and distributed to state television stations.

### Exhibits and Illustrations

The exhibits consultant developed 40 exhibits and displays during the year and made 78 reproductions and 50 illustrations. A total of 150 charts, graphs and maps were made, plus 160 signs, 89 slides and 28 miscellaneous illustrations. Forty conferences were conducted and 12 trips made for consultation on exhibits, displays and other creative productions.

### Educational Activities

The staff health educator participated in a variety of health education activities with many groups and agencies. Activities included attendance at the PTA State Conference, Florida Association for Health, Physical Education and Recreation annual workshop, Florida Education Association State Conference, Southern Branch of the American Public Health Association, State School Supervisors Conference and National Association of Sanitarians Conference.

The consultant participated in the Health Project in Teacher Education (see report of the Bureau of Maternal and Child Health elsewhere in this report) and assisted as a consultant in the development of a workshop on school health at Florida State University.

The consultant assisted the CHDs in the development of health education activities. Similar services were given to the public health educators employed in the CHDs. He served as a consultant to principals' workshops on health matters, conducted three SBH Orientation Programs and served as adviser to community health councils as requested.

The services of the health educator are being requested more and more to assist in developing programs that focus on the poverty aspects of society. The emphasis on health indicates that more personnel will be necessary to meet the demand for services requested.

## DIVISION OF PERSONNEL

MILES T. DEAN, M.A.
Director

Under the general direction of the State Health Officer, this division is responsible for the administration of the personnel program of the State Board of Health (SBH). This includes advising administrative officers concerning personnel practices and development; putting into effect procedures for carrying out approved personnel policies; participating in the preparation and administration of the approved Classification and Compensation Plan; administering the leave regulations; maintaining adequate personnel records on all persons employed in the agency; acting as liaison official with the Florida Merit System involving requests for certificates and reporting on the selection of eligibles, promotions, salary advancements, salary adjustments, demotions, transfers, dismissals, lay-offs and resignations; providing and administering a service rating system and the preparation of state and federal reports. Payroll operation, also a responsibility of this division, includes the administration of leave accounting, the employee insurance program, retirement and Social Security, as well as the preparation of the administrative payroll and distribution of warrants. Preparation of the salary portion of the Legislative Requesting and the Operational Budgets is also a responsibility of this division.

The total number of employees of the SBH increased significantly during the past year. There were 1398 employments. Most of these additional personnel were in programs included in the Grants and Donations category.

In April 1965, there was a major change in our personnel and payroll procedure. The payroll was changed to an add and delete operation, and the procedure for reporting personnel actions was changed so that such actions were made with the minimum amount of necessary work in the field on new IBM printed forms.

A major change was made in the classifications used by the SBH. This included a revision in the classes of health officers, dentists, nurses, sanitarians and nutritionists. A large percentage of the classes used by the SBH received a pay range increase, but the full implementation of the Merit System pay plan was not made. There was a considerable change in the pay plan rules effective August 1, which allowed considerably more flexibility on pay matters within the agency.

Turnover of personnel continued to be a real problem. There was a marked increase in turnover for higher-paid employees during this year.

Difficulties in recruitment and retention of employees increased. In the field of Sanitary Engineering, even after concerted efforts, only about 75 per cent of vacancies were filled. Retention of physicians, although the salary ranges for physician classes were revised upward, became a real problem. Recruitment of the entire spectrum of health workers became so difficult that employment above the minimum salary was on a considerable increase over previous years.

## TABLE 1

### NUMBER OF EMPLOYEES IN THE FLORIDA STATE BOARD OF HEALTH AND COUNTY HEALTH UNITS AS OF DECEMBER 31, 1956-1965

| Year | State Office | County Health Departments | Total Employees |
|---|---|---|---|
| 1965 | 914 | 2647 | 3561 |
| 1964 | 843 | 2326 | 3169 |
| 1963 | 762 | 1918 | 2680 |
| 1962 | 692 | 1821 | 2513 |
| 1961 | 626 | 1593 | 2219 |
| 1960 | 604 | 1534 | 2138 |
| 1959 | 586 | 1396 | 1982 |
| 1958 | 558 | 1321 | 1879 |
| 1957 | 528 | 1234 | 1762 |
| 1956 | 481 | 1127 | 1608 |

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## TABLE 2

### DISTRIBUTION OF PERSONNEL, FLORIDA STATE BOARD OF HEALTH (OTHER THAN COUNTY HEALTH DEPARTMENTS) DECEMBER 31, 1965

| ADMINISTRATIVE UNIT | Totals | Physicians | Public Health Dentists | Public Health Nurses | Sanitary Engineers | Sanitarians | Laboratory Wkrs. (Prof. and Tech.) | Mental Health | Other Professional and Technical | Clerical | All Others |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Grand Total | 914 | 28 | 11 | 81 | 33 | 27 | 202 | 7 | 121 | 277 | 127 |
| Administration | | | | | | | | | | | |
| Research | 20 | 2 | ..... | ..... | ..... | ..... | 6 | 1 | 4 | 6 | 1 |
| Training | 18 | 1 | ..... | 5 | 1 | 4 | ..... | 2 | 2 | 3 | ..... |
| State Health Officer | 35 | 8 | ..... | ..... | ..... | 1 | 3 | ..... | 7 | 16 | ..... |
| Health Education | 14 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 6 | 6 | 2 |
| Personnel | 14 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4 | 10 | ..... |
| Nursing | 12 | ..... | ..... | 10 | ..... | ..... | ..... | ..... | ..... | 2 | ..... |
| Encephalitis Research Center | 8 | 2 | ..... | ..... | ..... | ..... | 2 | ..... | ..... | 1 | 3 |
| Dental Health | 15 | ..... | 10 | ..... | ..... | ..... | ..... | ..... | 2 | 3 | ..... |
| Entomology | | | | | | | | | | | |
| State and Regional Offices | 23 | ..... | ..... | ..... | 1 | ..... | 11 | ..... | 1 | 4 | 6 |
| Research Center—Vero Beach | 53 | ..... | ..... | ..... | ..... | ..... | 29 | ..... | 1 | 3 | 20 |
| Arthropod Laboratory in West Florida | 8 | ..... | ..... | ..... | ..... | ..... | 4 | ..... | ..... | 1 | 3 |
| Finance and Accounts | | | | | | | | | | | |
| Fiscal | 14 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 6 | 8 | ..... |
| Purchasing and Property | 7 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 4 | 1 |
| Building and Facilities | 35 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 6 | 28 |
| Laboratories | | | | | | | | | | | |
| Central—Jacksonville | 66 | ..... | ..... | ..... | ..... | 1 | 47 | ..... | ..... | 7 | 11 |
| Miami | 22 | ..... | ..... | ..... | ..... | ..... | 17 | ..... | ..... | 2 | 3 |
| Orlando | 10 | ..... | ..... | ..... | ..... | ..... | 6 | ..... | ..... | 1 | 3 |
| Pensacola | 9 | ..... | ..... | ..... | ..... | ..... | 5 | ..... | ..... | 1 | 3 |
| Tallahassee | 7 | ..... | ..... | ..... | ..... | ..... | 4 | ..... | ..... | 1 | 2 |
| Tampa | 21 | ..... | ..... | ..... | ..... | ..... | 13 | ..... | ..... | 3 | 5 |
| West Palm Beach | 7 | ..... | ..... | ..... | ..... | ..... | 6 | ..... | ..... | 1 | ..... |
| Epidemiology of St. Louis Encephalitis | 19 | ..... | ..... | 1 | ..... | ..... | 11 | ..... | ..... | 3 | 4 |
| Local Health Services | | | | | | | | | | | |
| Bureau of Local Health Services | 9 | 1 | ..... | ..... | ..... | 1 | ..... | ..... | 2 | 5 | ..... |
| Sanitation | 6 | ..... | ..... | ..... | ..... | 5 | ..... | ..... | 1 | ..... | ..... |
| Nutrition | 10 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 8 | 2 | ..... |
| Civil Defense | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... |
| Accident Prevention | 2 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... |

## TABLE 2 (Continued)

### DISTRIBUTION OF PERSONNEL, FLORIDA STATE BOARD OF HEALTH (OTHER THAN COUNTY HEALTH DEPARTMENTS) DECEMBER 31, 1965

| ADMINISTRATIVE UNIT | Totals | Physicians | Public Health Dentists | Public Health Nurses | Sanitary Engineers | Sanitarians | Laboratory Wkrs. (Prof. and Tech.) | Mental Health | Other Professional and Technical | Clerical | All Others |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Maternal and Child Health | 60 | 4 | ..... | 22 | ..... | 9 | ..... | 3 | 4 | 13 | 5 |
| Mental Health | 8 | ..... | ..... | 2 | ..... | ..... | ..... | 1 | 1 | 4 | ..... |
| Narcotics | 19 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 13 | 6 | ..... |
| Preventable Diseases | | | | | | | | | | | |
| Bureau of Preventable Diseases | 11 | 3 | ..... | ..... | ..... | ..... | 2 | ..... | 1 | 5 | ..... |
| Radiological and Occupational Health | 20 | 1 | ..... | ..... | ..... | 1 | 4 | ..... | 6 | 6 | 2 |
| Tuberculosis Control | 68 | 4 | ..... | 22 | ..... | ..... | 14 | ..... | 3 | 24 | 1 |
| Venereal Disease Control | 19 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 15 | 4 | ..... |
| Veterinary Public Health | 5 | ..... | ..... | ..... | ..... | 2 | ..... | ..... | 1 | 2 | ..... |
| Vaccination Assistance Project | 52 | ..... | ..... | 18 | ..... | ..... | 1 | ..... | 4 | 15 | 14 |
| Sanitary Engineering and Air Pollution Control | 86 | ..... | ..... | ..... | 31 | 2 | 16 | ..... | 5 | 23 | 9 |
| Special Health Services | | | | | | | | | | | |
| Bureau of Special Health Services | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... |
| Hospitals and Nursing Homes | 16 | ..... | 1 | ..... | ..... | 1 | ..... | ..... | 6 | 8 | ..... |
| Chronic Diseases | 14 | 1 | ..... | 1 | ..... | ..... | 1 | ..... | 2 | 9 | ..... |
| Community Cancer Demonstrations | 3 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2 | ..... |
| Vital Statistics | | | | | | | | | | | |
| Bureau and Division of Vital Records | 47 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 5 | 42 | ..... |
| Statistics | 5 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3 | 2 | ..... |
| Data Processing | 13 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 10 | 1 |

## TABLE 3

### DISTRIBUTION OF PERSONNEL IN COUNTY HEALTH UNITS, FLORIDA, DECEMBER 31, 1965

| COUNTY | Totals | Physicians | Public Health Dentists | Public Health Nurses | Sanitary Engineers | Sanitarians | Laboratory Wkrs. (Prof. and Tech.) | Mental Health | Other Professional and Technical | Clerical | All Others |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Grand Total | 2647 | 122 | 21 | 724 | 17 | 339 | 46 | 92 | 61 | 484 | 741 |
| Alachua | 43 | 2 | ...... | 13 | ...... | 6 | ...... | 6 | 1 | 10 | 5 |
| Baker | 4 | ...... | ...... | 1 | ...... | 1 | ...... | ...... | ...... | 1 | 1 |
| Bay | 17 | 1 | ...... | 6 | ...... | 3 | ...... | 2 | ...... | 3 | 2 |
| Bradford | 7 | 1 | ...... | 3 | ...... | 1 | ...... | ...... | ...... | 1 | 1 |
| Brevard | 45 | 1 | ...... | 15 | 2 | 10 | 1 | 2 | ...... | 13 | 1 |
| Broward | 105 | 3 | 2 | 30 | 3 | 18 | 4 | 3 | 3 | 29 | 10 |
| Calhoun | 4 | ...... | ...... | 1 | ...... | 1 | ...... | ...... | ...... | 1 | 1 |
| Charlotte | 11 | 1 | ...... | 5 | ...... | 3 | ...... | ...... | ...... | 1 | 1 |
| Citrus | 6 | 1 | ...... | 2 | ...... | 1 | ...... | 1 | ...... | 1 | ...... |
| Clay | 10 | ...... | ...... | 5 | ...... | 2 | ...... | ...... | ...... | 2 | 1 |
| Collier | 14 | 1 | ...... | 3 | ...... | 3 | ...... | 2 | ...... | 4 | 1 |
| Columbia | 9 | 1 | ...... | 3 | ...... | 3 | ...... | ...... | ...... | 1 | 1 |
| Dade | 434 | 45 | 9 | 161 | 4 | 58 | 19 | 13 | 17 | 87 | 21 |
| DeSoto | 7 | ...... | ...... | 3 | ...... | 1 | ...... | 1 | ...... | 2 | ...... |
| Dixie | 3 | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | 1 | 1 |
| Duval | 52 | 2 | 1 | 17 | ...... | 9 | 1 | 6 | ...... | 10 | 6 |
| Escambia | 75 | 4 | ...... | 25 | ...... | 14 | 2 | 3 | 2 | 18 | 7 |
| Flagler | 3 | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... | 1 | ...... |
| Franklin | 4 | ...... | ...... | 1 | ...... | 1 | ...... | ...... | ...... | 1 | 1 |
| Gadsden | 13 | 1 | ...... | 6 | ...... | 3 | ...... | ...... | ...... | 2 | 1 |
| Gilchrist | 3 | ...... | ...... | 2 | ...... | ...... | ...... | ...... | ...... | 1 | ...... |
| Glades | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... |
| Gulf | 5 | ...... | ...... | 2 | ...... | 1 | ...... | ...... | ...... | 2 | ...... |
| Hamilton | 5 | ...... | ...... | 2 | ...... | 1 | ...... | ...... | ...... | 1 | 1 |
| Hardee | 6 | ...... | ...... | 3 | ...... | 1 | ...... | ...... | ...... | 1 | 1 |
| Hendry | 12 | ...... | ...... | 5 | ...... | 1 | ...... | ...... | ...... | 3 | 3 |
| Hernando | 3 | ...... | ...... | 1 | ...... | 1 | ...... | ...... | ...... | 1 | ...... |
| Highlands | 9 | 1 | ...... | 3 | ...... | 2 | ...... | 1 | ...... | 2 | ...... |
| Hillsborough | 188 | 6 | 2 | 7 | 2 | 35 | 3 | 4 | 8 | 38 | 20 |
| Holmes | 6 | ...... | ...... | 2 | ...... | 1 | ...... | ...... | ...... | 1 | 2 |
| Indian River | 11 | 1 | ...... | 5 | 1 | 1 | ...... | ...... | ...... | 2 | 1 |
| Jackson | 14 | 1 | ...... | 4 | ...... | 2 | ...... | 1 | ...... | 2 | 4 |
| Jefferson | 6 | 1 | ...... | 2 | ...... | 1 | ...... | ...... | ...... | 1 | 1 |
| Lafayette | 4 | ...... | ...... | 1 | ...... | 1 | ...... | ...... | ...... | 1 | 1 |
| Lake | 18 | 1 | 1 | 7 | ...... | 3 | ...... | ...... | ...... | 4 | 2 |
| Lee | 17 | 1 | ...... | 6 | ...... | 3 | 1 | 1 | ...... | 5 | ...... |
| Leon | 41 | 2 | ...... | 11 | ...... | 6 | ...... | 6 | 1 | 11 | 4 |
| Levy | 5 | ...... | ...... | 2 | ...... | 1 | ...... | ...... | ...... | 1 | 1 |
| Liberty | 2 | ...... | ...... | 1 | ...... | ...... | ...... | ...... | ...... | 1 | ...... |
| Madison | 6 | 1 | ...... | 2 | ...... | 1 | ...... | ...... | ...... | 1 | 1 |
| Manatee | 32 | 1 | ...... | 11 | ...... | 7 | ...... | 3 | 1 | 7 | 2 |
| Marion | 18 | 1 | ...... | 7 | ...... | 2 | ...... | 1 | 1 | 4 | 2 |
| Martin | 5 | ...... | ...... | 2 | ...... | 2 | ...... | ...... | ...... | 1 | ...... |
| Monroe | 16 | 1 | ...... | 5 | ...... | 2 | ...... | ...... | ...... | 4 | 4 |
| Nassau | 13 | 1 | ...... | 4 | ...... | 2 | ...... | ...... | ...... | 3 | 3 |
| Okaloosa | 20 | 1 | ...... | 7 | ...... | 4 | 1 | 1 | 1 | 3 | 2 |
| Okeechobee | 5 | ...... | ...... | 1 | ...... | 1 | ...... | ...... | 1 | 1 | 1 |
| Orange | 95 | 4 | 1 | 26 | ...... | 17 | 1 | 4 | 5 | 23 | 14 |
| Osceola | 6 | ...... | ...... | 2 | ...... | 1 | ...... | ...... | ...... | 2 | 1 |
| Palm Beach | 126 | 9 | 2 | 36 | 2 | 21 | 2 | 8 | 6 | 28 | 12 |
| Pasco | 8 | 1 | ...... | 3 | ...... | 2 | ...... | ...... | ...... | 1 | 1 |
| Pinellas | 184 | 9 | 1 | 72 | 1 | 29 | 8 | 5 | 7 | 43 | 9 |
| Polk | 96 | 3 | 1 | 40 | 2 | 11 | 2 | 2 | 2 | 19 | 14 |
| Putnam | 15 | 1 | ...... | 5 | ...... | 4 | ...... | 1 | ...... | 3 | 1 |
| St. Johns | 10 | 1 | ...... | 4 | ...... | 2 | ...... | ...... | ...... | 2 | 1 |
| St. Lucie | 21 | 1 | ...... | 4 | ...... | 5 | ...... | 5 | ...... | 5 | 1 |
| Santa Rosa | 12 | 1 | ...... | 5 | ...... | 2 | ...... | ...... | ...... | 2 | 2 |
| Sarasota | 45 | 1 | ...... | 15 | ...... | 8 | ...... | 3 | ...... | 16 | 2 |
| Seminole | 17 | 1 | ...... | 8 | ...... | 2 | ...... | 1 | ...... | 3 | 2 |
| Sumter | 4 | ...... | ...... | 1 | ...... | 1 | ...... | ...... | ...... | 1 | 1 |
| Suwannee | 9 | 1 | ...... | 3 | ...... | 1 | ...... | ...... | ...... | 2 | 2 |
| Taylor | 5 | ...... | ...... | 2 | ...... | 1 | ...... | ...... | ...... | 1 | 1 |
| Union | 3 | ...... | ...... | 1 | ...... | 1 | ...... | ...... | ...... | 1 | ...... |
| Volusia | 58 | 3 | 1 | 21 | ...... | 9 | ...... | 5 | ...... | 10 | 9 |
| Wakulla | 3 | ...... | ...... | 1 | ...... | ...... | ...... | 1 | ...... | 1 | ...... |
| Walton | 9 | 2 | ...... | 2 | ...... | 1 | 1 | ...... | ...... | 2 | 1 |
| Washington | 5 | ...... | ...... | 2 | ...... | 1 | ...... | ...... | ...... | 1 | 1 |

## TABLE 3 (Continued)

## DISTRIBUTION OF PERSONNEL IN COUNTY HEALTH UNITS, FLORIDA, DECEMBER 31, 1965

| COUNTY | Totals | Physicians | Public Health Dentists | Public Health Nurses | Sanitary Engineers | Sanitarians | Laboratory Wkrs. (Prof. and Tech.) | Mental Health | Other Professional and Technical | Clerical | All Others |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Eradication of *Aedes aegypti* Mosquitoes | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Alachua A. A. | 11 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 10 |
| Brevard A. A. | 12 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 11 |
| Broward A. A. | 51 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 50 |
| Dade A. A. | 157 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 2 | 155 |
| Duval A. A. | 26 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 4 | 10 | 12 |
| Escambia A. A. | 15 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 14 |
| Hillsborough A. A. | 67 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 1 | 65 |
| Lee A. A. | 20 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 19 |
| Leon A. A. | 8 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 7 |
| Manatee A. A. | 27 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 26 |
| Monroe A. A. | 15 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 14 |
| Orange A. A. | 28 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 27 |
| Palm Beach A. A. | 45 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 44 |
| Pinellas A. A. | 53 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 52 |
| Palk A. A. | 15 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 14 |
| St. Lucie A. A. | 10 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 10 |
| Sarasota A. A. | 13 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 13 |
| Valusia A. A. | 6 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 5 |

## TABLE 4

## EMPLOYMENT TERMINATIONS AND TURNOVER RATES BY CLASSIFICATION AND SALARY, FLORIDA STATE BOARD OF HEALTH AND COUNTY HEALTH UNITS, 1965 (FULL-TIME EMPLOYEES ONLY)

| CLASSIFICATION | SALARY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Under 199 | 200–299 | 300–399 | 400–499 | 500–599 | 600–699 | 700–799 | 800–899 | 900–999 | 1,000 Over |
| TERMINATIONS 1965 | | | | | | | | | | | |
| Total—All employees | 916 | 47 | 221 | 416 | 121 | 30 | 43 | 10 | 8 | 3 | 17 |
| Physicians | 22 | .... | .... | .... | .... | .... | 3 | 1 | 2 | 1 | 15 |
| Dentists | 20 | .... | .... | .... | 5 | .... | 15 | .... | .... | .... | .... |
| Sanitarians | 35 | .... | .... | 8 | 21 | 5 | .... | .... | 1 | .... | .... |
| Sanitary Engineers | 8 | .... | .... | .... | .... | 5 | 1 | 1 | .... | .... | 1 |
| Public Health Nurses | 126 | .... | 5 | 65 | 53 | 1 | 2 | .... | .... | .... | .... |
| Laboratory Workers (prof. & tech.) | 36 | .... | 8 | 11 | 7 | 3 | 3 | 3 | .... | 1 | .... |
| Mental Health | 52 | .... | .... | 3 | 10 | 9 | 19 | 5 | 4 | 1 | 1 |
| Other professional and technical | 18 | .... | .... | .... | 10 | 7 | .... | .... | 1 | .... | .... |
| Clerical | 189 | 1 | 133 | 51 | 4 | .... | .... | .... | .... | .... | .... |
| All others | 410 | 46 | 75 | 278 | 11 | .... | .... | .... | .... | .... | .... |
| TURNOVER RATE* | | | | | | | | | | | |
| Total—All employees | 25.7 | 38.2 | 42.0 | 37.4 | 11.6 | 9.3 | 22.5 | 15.2 | 16.7 | 15.8 | 15.3 |
| Physicians | 14.7 | .... | .... | .... | .... | .... | 37.5 | 100.0 | 100.0 | 14.3 | 16.9 |
| Dentists | 68.5 | .... | .... | .... | 62.5 | .... | 100.0 | .... | .... | .... | .... |
| Sanitarians | 9.6 | .... | .... | 266.7 | 12.1 | 3.9 | .... | 50.0 | .... | .... | .... |
| Sanitary Engineers | 16.0 | .... | .... | .... | .... | 100.0 | 9.1 | 16.7 | .... | .... | 9.1 |
| Public Health Nurses | 15.7 | .... | 20.8 | 69.9 | 9.0 | 1.5 | 7.4 | .... | .... | .... | .... |
| Laboratory Workers (prof. and tech.) | 14.5 | .... | 20.8 | 18.6 | 12.3 | 7.1 | 10.3 | 25.0 | .... | 100.0 | .... |
| Mental Health | 52.5 | .... | .... | 150.0 | 52.6 | 30.0 | 82.6 | 71.4 | 40.0 | 100.0 | .... |
| Other professional and technical | 9.9 | .... | .... | .... | 17.5 | 15.9 | .... | .... | 11.1 | .... | .... |
| Clerical | 24.8 | 4.8 | 44.8 | 13.6 | 5.9 | .... | .... | .... | .... | .... | .... |
| All others | 47.2 | 51.7 | 47.5 | 48.8 | 22.9 | .... | .... | .... | .... | .... | .... |

*Per cent of full time employees terminating by classification during 1965.

## DIVISION OF PUBLIC HEALTH NURSING

**ENID MATHISON, R.N., M.P.H.**
**Director**

A primary function of this division is to coordinate and to consult with all other units of the State Board of Health (SBH) concerning programs and projects which require nursing services. Guidance and assistance is given to public health nursing at the local levels in the planning and development of the various public health programs.

Special efforts are made to recruit nurses from the colleges of nursing, since this is the only public health preparation available at the undergraduate level. As nursing services expand and become more complex it is imperative that well qualified nurses give leadership and supervision to staff nurses and to the increasing numbers of nonprofessional people who will be involved with providing care for patients in their homes.

The nursing consultants participate in planning conferences with bureau and division directors, and interpret to the county health department (CHD) personnel the policies of the SBH and the newer trends in nursing programs. Upon request they work with local nursing directors and supervisors to improve the administrative and supervisory services within the nursing unit. Assistance is given in the planning and implementation of community health activities, workshops and continuing education programs for all nurses.

The consultants who gave special emphasis to the vaccination assistance program in the state worked with many of the counties to orient them in the initial procedures necessary for participation in the program. A great deal of time and effort went into the preparation of a time equivalency reporting form which makes it possible for the nursing personnel assigned on the special project funds to function in a generalized public health program.

A short-term traineeship grant from the U.S. Public Health Service made possible a one-week seminar on public health nursing administration in November. Nursing directors and supervisors from 28 CHDs, two visiting nurse associations, public health faculty from three colleges of nursing and nursing administrators from four other states participated in the course.

The continuing education committee, under the leadership of the nursing education consultant, has prepared an orientation guide for use in the four field training centers. All newly employed nurses who have not had preparation or experience in public health nursing are required to have a planned eight weeks orientation before permanent status is granted.

In cooperation with the director of the Division of Tuberculosis Control, a guide for the Tuberculosis Control Program was completed. This will constitute one unit in the public health nursing manual now under revision.

There are now 42 voluntary nursing organizations, incorporated as nonprofit bodies, which contribute to or provide nursing care to the sick at home. With the exception of the seven independent visiting nurse associations, the service is combined with the CHD to provide a generalized nursing service to the community. In these 42 agencies, fees collected for nursing services are administered by the agency, the monies reverting back into nursing service. Fees are collected on a sliding scale, according to the ability of the patient to pay; however, no one goes without nursing care because of a lack of funds. A number of CHDs have enabling acts which permit them to receive money for services rendered. All counties accept referrals for Medical Assistance to the Aged patients, and in some of the smaller counties, where there is no organized nursing care of the sick at home program, additional services are given on a limited basis. Additional nursing staff will be necessary before the service can be expanded in most areas of the state. The demands for nursing care of the sick at home are expected to increase markedly with the inception of the medicare program. Unfortunately, lack of nursing staff curtails many services badly needed by the CHDs.

The division has developed a survey form which will be used to determine the readiness of agencies — both official and non-official — for certification as providers for Home Health Services, as defined in Public Law 89-97. All consultants will give these top priority in January and February, 1966, so that the agencies ready for certification can participate in funds now available to the state.

Studies to determine the time and cost of units of nursing activities have been completed in 17 counties. The following are examples of the cost per visit and average time in minutes spent giving care to the patient on disease and disability visits:

| | **Cost** | **Time** |
|---|---|---|
| Clay CHD | $6.56 | 36 |
| Manatee CHD | 5.83 | 49 |
| Jacksonville VNA | 5.58 | 67 |
| Okaloosa CHD | 4.44 | 35 |
| Sarasota CHD | 6.79 | 53 |

In recent years the number of midwives has been decreasing at about 10 per year; 179 were licensed in 1965. A definite need for the services of a midwife is established before a woman is selected for training. Before licensure a new applicant must complete a three weeks training program, sponsored by a maternity home and the CHD (Seminole).

A grant of $3000 was secured from the Florida Council on Training and Research in Mental Health for a detailed study to determine the mental health engendering concepts in the Florida Midwife Program. Data have been collected and will be published when the material has been analyzed and conclusions reached.

The three orientation programs at the Gainesville Sunland Training Center were attended by 71 people; two at Fort Myers by 47; two at Marianna by 63; and two at Orlando by 66. These programs make it possible for professional workers, rehabilitation personnel, special teachers and social workers to see the facilities available within the state for the care of selected mentally retarded children. Many of the training programs at the institution can be adapted for use in the local communities. Communications among agencies have improved considerably as a result of the orientation programs at the institutions. The consultant in this program is also promoting community action programs so that maximum services will be available to the non-institutionalized retarded in communities throughout the state.

The consultant in rehabilitation nursing had the major role in the preparation of a book BLUEPRINT FOR STROKE REHABILITATION THROUGH COMMUNITY ACTION. This was a joint project of the SBH and Florida Heart Association. Educational programs in rehabilitation nursing were conducted for public health nurses, institutional nurses and nursing home personnel. The requests and need for these programs in nursing homes can not be met.

The Advisory Committee on Public Health Nursing, appointed by the SBH in 1963, published its first report in 1964. This dealt with the study of the role, problems and direction of public health nursing in Florida. The committee gave invaluable assistance to the division this year in the revision of the Merit System Nurse Classification Series.

## BUREAU OF DENTAL HEALTH

**FLOYD H. DeCAMP, D.D.S.**
**Director**

**DELMAR R. MILLER, D.D.S., M.P.H.**
**Assistant Director**

The dental health program expanded this year due to an increase of funds made available through the Children's Bureau, the U.S. Public Health Service (USPHS), at the state level and by the interest of county health department (CHD) directors in the establishment of well planned and equipped dental clinics in many of the new health centers built this year.

The clinics are staffed with at least one full-time dentist and a dental assistant. Some counties have several well equipped dental clinics in areas throughout the county.

During the year, the bureau participated in a number of Headstart Projects and also in other special dental health projects conducted throughout the state by local dentists.

The bureau is greatly assisted in the conduct and planning of programs through the efforts of the dental member of the State Board of Health (SBH). The state law in Florida provides that one of the five members be a dentist. This action assists in forming much closer cooperation between the bureau and the members of the Florida State Dental Society.

The Dental Scholarship Program and the Dental Preceptorship Program being administered jointly by the Florida State Board of Dental Examiners and this bureau has resulted in an excellent association and cooperation between these two state agencies.

### PRECEPTORSHIP PROGRAM

Since its beginning in 1957, this program has provided an effective method of recruiting dentists to staff dental clinics in CHDs. Preceptees are selected by the Florida State Board of Dental Examiners and supervision of their work is provided by a dental consultant from this bureau, a committee of dentists from the local dental society and the director of CHDs in their respective areas.

Some 125 highly qualified young dentists have served in the program during the nine years of its operation. Most of these men have entered private practice in the state on completion of their assignments and continue to maintain great interest in public health matters of their communities.

Counties served by dental preceptees during all or a portion of 1965 were: Alachua, Broward, Collier, DeSoto, Duval, Flagler, Glades, Hardee, Hendry, Highlands, Hillsborough, Lake, Manatee, Marion, Palm Beach, Polk, Putnam, Sarasota, Santa Rosa and Volusia. Preceptees also served in the Jacksonville City Health Department and as operators of the two mobile dental clinics of the Bureau of Dental Health.

In addition to preceptees serving throughout the state of Florida in CHDs, there are 12 dentists engaged full time in dental public health on the county and state level.

### DENTAL SCHOLARSHIPS

Ten dental scholarships were awarded in 1965. These were granted in accordance with the dental scholarship law which provides a stipend of up to $1000 per year for as many as four years for recipients who agree to practice in "areas of need" (where there are few or no dentists) for 12 months for each $1000 received. Students may repay the funds received under certain circumstances. Since 1955, a total of 111 scholarships have been awarded, four of which were cancelled before becoming effective.

Disposition of the 69 graduates to date:

| | |
|---|---|
| Serving in "areas of need" | 23 |
| Repaid scholarship in full (cash) | 17 |
| In military service | 10 |
| Completed compensatory practice | 14 |
| Repaying stipends received | 4 |
| Obligated to repay but not qualified for Florida licensure | 1 |
| | 69 |

### DENTAL CLINICS

During the year, a total of 35 fixed dental clinics were operating in 27 counties. All served only underprivileged children in elementary grades or underprivileged expectant mothers. Full-time licensed public health dentists served all or a portion of the year in the dental clinics of the following counties: Broward, Dade, Jackson, Liberty, Orange, Palm Beach, Pinellas, St. Johns and Volusia. In addition, the bureau assigned two completely equipped mobile dental clinics to various counties. These mobile clinics are maintained to serve underpriviledged elementary school children in counties having few or no practicing dentists. Financing and supervision of mobile clinic operators is provided by this bureau, the preceptorship committees and the county health officers in the counties or areas where the clinics are assigned. One mobile clinic operated for four months and the other operated for 10 months during the year. A summary of the services performed follows:

| | |
|---|---|
| School dental inspections | 95 |
| New Patients | 1192 |
| Repeat Patients | 325 |
| Prophylaxis | 266 |
| Fillings (all types) | 3037 |
| Extractions | 1592 |
| Miscellaneous treatments | 289 |
| Topical fluoride applications | 20 |
| Talks given to school and civic groups | 5 |
| Pamphlets distributed | 200 |

As a continuance of previous efforts to develop ways of providing dental services to handicapped children, a mobile clinic was assigned for one month to a special school for the handicapped. Preventive dental services and treatments were provided for the underprivileged children attending the school.

A new dental clinic began operation in Hardee County. Charlotte County completed installation of dental equipment in a new clinic. DeSoto County acquired a portion of the equipment necessary to begin a dental treatment program. Clay CHD completed installation of equipment in the dental clinic of a new building.

A full-time dental hygienist was employed during the entire year. Her efforts made it possible to increase the amount of assistance given to the growing number of requests for aid to school dental health programs. The hygienist gave dental inspections to 6009 children in 19 different schools in 11 counties. A total of 69 lectures were presented to students, teachers and PTA groups. Approximately 250 stannous flouride treatments were performed by the dental hygienist at the Florida School for the Deaf and Blind at St. Augustine and at the girls' 4-H encampment at Doe Lake in Marion County. The hygienist served as a coordinator for the Florida Health Project in Teacher Education at one of the participating universities.

### FLUORIDATION

Many communities expressed interest in the matter of water fluoridation during the year. Pensacola ceased fluoridation as a result of city commission action. Daytona Beach, in a referendum, voted heavily in favor of fluoridation and is proceeding with the necessary plans. Fluoridation was approved by city commission action in Sanford and Eau Gallie. A negative decision resulted from a fluoridation referendum held in DeLand.

At the end of 1965, 26 Florida cities, with a combined population of over 756,132, were fluoridating water supplies. An additional population of more than 300,446 residing in 26 other cities, including Jacksonville and Sarasota, is served by water supplies containing approximately the correct amount of fluoride as a natural component. In all areas, a total population exceeding 1,056,578 is receiving the benefits of water containing fluoride at near optimal level to control dental decay.

#### Oral Cytology Project

In 1964, this bureau, in cooperation with the Florida State Dental Society and Florida Northeast District Dental Society, initiated an oral exfoliative cytology project in a 17-county area of northeast Florida. It was funded by the USPHS with the understanding that at the end of one year it would be evaluated and considered for expansion statewide.

The evaluation committee consisting of four dentists, a physician, an oral surgeon and pathologist, met May 26, 1965. The decision was made to expand the program. Sufficient funds from the first year's fund grant were available to permit the expansion to a statewide program for an additional year.

The four other dental districts agreed to participate in the program. Plans were immediately made to organize an oral cytology committee in various local dental societies throughout the state, and to conduct orientation programs for all participating dentists. These orientation programs are now being conducted and will eventually include all local dental societies within each district.

Local participating pathologists in each area examine the smears and biopsies submitted by the dentists, and are paid from project funds by the Bureau of Dental Health. One dentist in south Florida, who holds a fellowship in the American Academy of Oral Pathology, is examining smears and biopsies for dentists in the Miami area. In other areas throughout the state, the local dentists are inviting medical pathologists in their area to participate in evaluating cytological slides and biopsies.

So far, there have been approximately 60 dentists throughout the state who have submitted specimens for examination, and the number is steadily growing as new areas are included in the program.

## LACTOBACILLUS LABORATORY PROGRAM

A few years ago this bureau, in cooperation with the Bureau of Laboratories, adopted a simple diagnostic test of saliva from young patients who had an excessive amount of dental caries. An increased number of dentists throughout the state have utilized this service during the past year because it is an approved scientific fact that a change in the diet, in which other foods are substituted for carbohydrates and sweets with proper control, will markedly reduce the dental decay rate. In 1965, 106 dentists participated in this program, and each year the program is increasing in scope.

## HEALTH EDUCATION

A variety of dental health activities were carried on in Florida during the year. The ultimate objective is to decrease the vast amount of dental decay and tooth loss among the children of this state.

Parents and teachers have been encouraged to make more effective use of known dental health measures to reduce the high rate of dental decay and early loss of permanent teeth of young children.

The Florida State Dental Society has adopted a unique policy in which local dentists — through official action of the Florida State Dental Society — are encouraged to serve as dental health consultants to elementary and high schools in the various counties. Through the interest of the Florida State Department of Education and many county boards of public instruction, this new program has provided a close liaison between school principals and school health coordinators on a statewide basis. It is estimated that in 1965, 1100 dentists served in this capacity.

Not only were there many thousands of school dental inspections performed by these dentists, but they lectured on dental health to civic groups, and they assisted in the introduction of *DESIGN FOR TEACHING DENTAL HEALTH IN FLORIDA SCHOOLS*, Bulletin 7.

Dental health education in local 4-H clubs was improved, and distribution of dental health educational materials for the members has increased.

The major portion of the health educator's time was spent in public and private schools, meeting with administrators and teachers to promote effective dental health education from primary grades through college level. Some of these activities were to assist in teacher preplanning conferences at the beginning of the school year, as well as for groups of health coordinators during the year.

Lectures on the value of dental health were given in most of the 50 junior colleges and universities each term. In addition, presentations on dental public health were given at least once a year in each of the three Florida schools of dental hygiene.

Meetings were held in six urban areas with dental advisors (private dentists serving elementary schools in the company of consultants) and school supervisors to show the latest audio visual aids and new teaching materials available from the SBH.

The health educator also served as a SBH consultant on the Florida Health Project in Teacher Education. (See report of Bureau of Maternal and Child Health elsewhere in this report.)

# BUREAU OF ENTOMOLOGY

J. A. MULRENNAN, B.S.A.
Director

A most discouraging note for 1965 in the field of public health entomology was the finding that salt-marsh mosquitoes were showing a terrific resistance to the fogging application of Malathion for adult mosquito control. This excellent insecticide was first used in the state on wide-scale application in the mosquito control districts in 1957. The chemical has been an extremely effective adulticide, the only method of use in mosquito control. This now means that many counties will be required to turn to another insecticide to destroy resistant adult mosquitoes.

The encephalitis surveillance program appears to be working quite well since it has been able to show, by collecting mosquitoes from different sections of the state and examining them for arbovirus, that St. Louis encephalitis (which caused the epidemic in the Tampa Bay area in 1962) was not present in mosquitoes examined in 1965. However, many other strains of arbovirus were circulating, as is shown in this report.

The federally-supported *Aedes aegypti* Eradication Program continued operations throughout the year with expansion to other counties in addition to the seven original counties reported upon last year. The funds were increased to $3,066,000 during 1965. Two years operation is not sufficient to provide definite conclusions, but it is apparent that excellent reduction in breeding is being accomplished in the Tampa Bay counties. Unfortunately, with the exception of Monroe County, the same cannot be said for the three other southeastern counties. In fact, resistance to DDT is in evidence in Dade County. Many other methods of control are being carried out in hopes of finding a method which will be effective in this area. In addition to extensive container breeding, the area presents a unique problem of breeding in cultivated bromiliads found by the thousands on many premises.

## ARTHROPOD CONTROL

### Source Reduction Accomplishments

The number of counties and/or mosquito control districts participating in the state aid program for the control of arthropods remained the same as during 1964. Fifty-seven programs were operated in 53 counties; 26 programs being directed by county health departments (CHD), six by boards of county commissioners and 25 by boards of mosquito commissioners.

Holmes County resumed participating in state aid after withdrawing for a year due to legal difficulties, and Calhoun County was dropped, due to the failure to meet state aid requirements for receiving state aid. Two separate programs continue to be operated in Bay, Duval, Lee and Walton Counties.

The state fund matching rate for source reduction measures averaged 20.75 per cent for the year; however, at the end of the year the matching rate was only 17.60 per cent. This reduction in the state matching rate each year appears to cause many counties and/or districts to increase their local annual budgets to offset the loss in state funds, which further reduces the percentage rate of state funds that can be given. In 1963 the local funds budgeted amounted to $4,865,700, and in 1965 the amount was $5,805,700, an increase of $940,000 in two years.

Hydraulic dredging was discontinued in Brevard County in February, 1965. Only one dredge is now operating (Indian River County), and it will likely be discontinued in 1966.

Some new dragline ditches were constructed; however, the greater portion of machine work performed was in maintenance of ditches constructed several years ago. The construction of dikes, for impounding salt-marsh mosquito breeding areas, continued in Brevard and St. Lucie Counties.

The disposal of solid waste material poses an ever increasing statewide problem. Considerable time was spent during the year in consulting with local officials, and making surveys pertaining to garbage and rubbish disposal. The 38 counties conducting sanitary landfills under the state program reported direct field costs for garbage disposal to amount to $659,482.

There follows a summary of the source reduction work accomplished throughout the state during 1965:

| | *1964* | *1965* |
|---|---|---|
| Machine Ditching and Maintenance | | |
| Number of counties participating | 33 | 34 |
| Miles of ditches dug or maintained | 447.164 | 427.741 |
| Cubic yards earth excavated | 3,604,286 | 3,662.598 |
| Average labor cost per cubic yard | $0.1032 | $0.1110 |
| Construction and Maintenance of Dikes | | |
| Number of counties participating | 4 | 4 |
| Miles of dike constructed or rebuilt | 47.54 | 34.06 |
| Cubic yards earth placed in dikes | 937,037 | 694,343 |
| Average labor cost per cubic yard | $0.0615 | $0.0810 |
| Hydraulic Dredging (10-inch Dredges) | | |
| Number of counties participating | 2 | 2 |
| Number of dredges used | 2 | 2 |
| Cubic yards earth fill placed | 1,023,298 | 206,252 |
| Average labor cost per cubic yard | $0.0575 | $0.1720 |
| Deepening and Filling (Draglines and Bulldozers) | | |
| Number of acres improved | 97.63 | 113.3 |
| Average labor cost per acre | $132.21 | $92.47 |
| Sanitary Landfills | | |
| Number of counties operating landfills | 35 | 38 |
| Total number of landfill sites operated | 121 | 143 |
| Total field costs in all counties | * | $659,482 |
| Cubic yards of garbage disposed of | 4,989,121 | 5,673,595 |
| Total field costs per cubic yard | $0.121 | $0.1162 |

*Figures not available.

### Temporary Control Measures

The temporary control of arthropods is accomplished by the application of insecticidal formulations, applied either as a larvicide or as an adulticide. The material is dispersed by either/or both ground and air equipment.

Airplane applications of insecticides were made, on a contract basis, in Dade, Broward, Martin and Indian River Counties. Counties owning and operating their aircraft for temporary control measures are Collier, Lee, Volusia, Monroe and Brevard.

Dibrom and Malathion were the principal insecticides used for adulticidal work. A small amount of Baytex formulation was successfully used on Sanibel Island in Lee County, following obtaining poor results with Malathion. The West Florida Arthropod Research Laboratory is conducting resistance studies, which is reported under its section.

The following is a summary of the ground adulticiding work performed during the calendar year. The costs shown are direct field costs, and do not include capital investment costs, depreciation of equipment, or supervision and overhead expenses.

| | *1964* | *1965* |
|---|---|---|
| Number of counties or districts doing ground fogging | 46 | 54 |
| Total number of hours fog machines operated | 62,511 | 57,737 |
| Total number of miles fogged | 372,537 | 389,571 |
| Gallons of insecticidal formulation used | 2,559,085 | 2,806,887 |
| Total field costs in all counties and districts | * | $1,271,100 |
| Average cost per hour for fogging | * | $22.02 |
| Average cost per mile for fogging | * | $3.26 |

*These figures not available for 1964. Reporting procedures revised on October 1, 1964.

Airplanes were used in eight counties for adulticiding and/or larviciding work. Hillsborough County received a surplus C-47 airplane, which at the end of the year was nearly ready for a restricted license for mosquito control work. Polk County purchased a new Piper Pawnee, which will be used in midge control work and herbiciding. Volusia County completed building a Bell helicopter, which was licensed and operating late in the year.

Adulticiding and Larviciding with Airplanes:

| | *1964* | *1965* |
|---|---|---|
| (1) Airplane Fogging (with Malathion and Baytex in 1965) | | |
| Number of counties and districts doing fogging | 3 | 4 |
| Gallons of insecticidal formulation applied | 227,041 | 303,408 |
| Acres treated | 2,706,840 | 2,641,833 |
| Gallons applied per acre (average) | 0.10235 | 0.11485 |
| Labor cost per acre treated | $0.0112 | Incomplete |
| (2) Airplane Spraying: | | |
| Number of counties and districts doing spraying | 5 | 5 |
| Gallons of spray formulation used | 160,124 | 214,459 |
| Acres treated | 221,864 | 308,512 |
| Gallons applied per acre | 0.7217 | 0.6951 |
| Labor cost per acre treated | $0.125 | Incomplete |

Adulticiding and Larviciding with Airplanes: (continued)

| | *1964* | *1965* |
|---|---|---|
| (3) Airplane Larviciding with Paris green: | | |
| Number of counties doing larviciding | 3 | 4 |
| Pounds of Paris green pellets used | 236,463 | 313,490 |
| Acres treated | 22,779 | 18,541 |
| Pounds applied per acre (Aver. 5% mix) | 10.38 | 16.90 |
| Labor cost per acre treated | $0.4945 | Incomplete |

### Dog Fly Control

Emulsifiable DDT, mixed with sea water, continued to be used by the most western Florida counties bordering on the Gulf of Mexico for controlling dog flies. The program was continued on the same basis and manner as in previous years. No spraying was permitted by the U. S. Fish and Wildlife Department on their reservation in Wakulla County, and no work was reported as being done in Escambia County.

The following is a summary of the dog fly control work performed in the seven remaining counties:

| | *1964* | *1965* |
|---|---|---|
| Total miles of shoreline treated | 962 | 963 |
| Gallons of 35 per cent DDT concentrate used | 12,634 | 12,219 |
| Average labor cost per mile | $8.33 | $9.47 |
| Number of man-hours labor required | 5,686 | 7,774 |

The control work continued to be effective, with only a very few small and localized outbreaks of short duration being reported.

### Counties Participating and Local Fund Budgets

The following counties participated in the State Arthropod Control Program during the year. The amounts of local funds budgeted for arthropod control activities during the fiscal year October 1, 1965 through September 30, 1966 are (as of December 31, 1965) as follows:

| *County* | *Local Amount* | *County* | *Local Amount* |
|---|---|---|---|
| Alachua | $ 88,194.00 | Hernando | 15,009.46 |
| Bay (Comm.) | 100,906.00 | Highlands | 4,625.00 |
| Bay (Gulf) | 51,857.13 | Hillsborough | 342,120.00 |
| Bradford | 16,334.11 | Holmes | 11,000.00 |
| Brevard | 346,966.17 | Indian River | 353,637.69 |
| Broward | 82,743.86 | Jackson | 5,036.89 |
| Charlotte | 80,938.33 | Jefferson | 10,727.23 |
| Citrus | 123,099.51 | Lake | 88,500.00 |
| Collier | 179,974.26 | Lee (District) | 502,306.95 |
| Columbia | 14,728.06 | Lee (Beach) | 63,011.00 |
| Dade | 241,599.00 | Leon | $ 80,000.00 |
| Duval (East) | 108,467.33 | Levy | 15,000.00 |
| Duval (Northeast) | 134,000.00 | Madison | 1,150.00 |
| Escambia | 125,199.95 | Manatee | 87,421.75 |
| Flagler | 14,191.28 | Marion | 30,000.00 |
| Franklin | 15,000.00 | Martin | 43,237.89 |
| Gadsden | 12,710.00 | Monroe | 283,215.27 |
| Gulf | 41,255.44 | Nassau | 61,549.00 |
| Hardee | 4,700.00 | Okaloosa | 42,243.50 |

| *County* | *Local Amount* | *County* | *Local Amount* |
|---|---|---|---|
| Orange | 107,143.00 | Sarasota | 158,601.94 |
| Osceola | 45,147.44 | Seminole | 15,000.00 |
| Palm Beach | 340,946.00 | Suwanee | 15,930.00 |
| Pasco | 80,210.91 | Taylor | 4,850.00 |
| Pinellas | 315,274.73 | Volusia | 319,081.64 |
| Polk | 228,003.00 | Wakulla | 18,000.00 |
| Putnam | 25,000.00 | Walton | 7,500.00 |
| St. Johns | 90,493.26 | Walton (South) | 22,262.20 |
| St. Lucie | 147,026.82 | Washington | 2,500.00 |
| Santa Rosa | 40,071.00 | | |
| Total local funds appropriated | | | $5,805,698.00 |
| Total state funds appropriated | | | 1,650,000.00 |
| TOTAL BUDGETED FUNDS FOR ARTHROPOD CONTROL | | | $7,455,698.00 |

**Engineering**

The engineering section continued its assistance to counties and districts through assisting the directors, commissioners and health officers with the many aspects related to their particular area and program. Assistance in the field was given through program planning, equipment needs, project plans and proposals, selection of landfill sites, preparation of budgets, specifications for purchase of heavy equipment, record keeping procedures, and preparation of monthly report forms.

The office staff maintained records pertaining to financial accounts of all 57 counties and districts; checked monthly report forms for accuracy, and tabulated progress and costs by activities.

**Regional Entomologists**

Five entomologists and one assistant continue to serve the state from locations in Panama City, Marianna, Jacksonville, Orlando, Tampa and Miami. They have continued to advise and give entomological assistance to counties and districts from these headquarters (except for Marianna, which is primarily concerned with encephalitis mosquito collections), while coordinating all regular phases of state and local activities, including the functions of planning, budgeting, operating, approving control projects, evaluating and reporting the progress of 57 mosquito control and landfill programs in 53 counties of the state.

A sample list of other duties, taking more or less time according to region, season and necessity, include meeting with county and district commissioners to discuss mosquito operations and procurement of personnel; participation in State Board of Health (SBH) orientation and sanitarian training classes; conducting tours for World Health Organization personnel and foreign students; addressing and showing films to various civil clubs and community groups, promoting and extending landfill programs in interested counties; assisting and training personnel of counties and districts to prepare progress and financial reports; field work in calibrating equipment for Paris green pellet application by airplanes and helicopter; assisting in pest control problems and investigating insecticide poisonings (heaviest in Miami, Tampa and Orlando); testifying in conjunction with pest control and fly problems; locating, relocating, terminating, arranging for new construction or repairs and securing cooperators in the mosquito light trapping program; collecting, developing techniques and arranging for collection of mosquitoes in suspected encephalitis areas (119,364 specimens — details elsewhere), and generally serving as a clearing house for information several times daily for people who telephone or visit the regional or central offices with their insect and pest problems.

**Arthropod Identification Laboratory**

The identification of arthopods of public health importance continues to be an increasing need for the citizens of Florida, both from a personal standpoint and also in conjunction with widespread control activities and research. The season just finished has been near normal for the most part, with a sizable increase in the encephalitis mosquito identification work. "Salt-Marsh Mosquitograms" have been published weekly to advise districts, counties and others interested of the current status of salt-marsh mosquotes in 43 coastal locations spaced evently around the state. The "Weekly Bird Baited Trap Collections" were published through October 30 as an aid to encephalitis research, and then discontinued. These traps, except for specific collections, are being replaced by more efficient and practical CDC traps.

Freshwater collections from 63 interior locations, Woodruff Dam, North Bay and Shell Creek impoundments, have been continued on a routine or seasonal basis throughout the period of this report.

As usual, the general public has kept this bureau abundantly supplied with arthropods and miscellaneous pests for identification. The technicians have rendered this service for so many years that they are becoming proficient with many arthropod groups outside their normal field.

The identification and pooling of live mosquitoes collected for encephalitis research in conjunction with work in the Jacksonville SBH virus laboratory has increased substantially during this year as a result of the improved trapping and $CO_2$ baiting techniques. Due to the close relationship of certain species commonly found in encephalitis collections and the fact that the anesthetized mosquitoes must be identified and preserved on ice within 30 minutes, the work is extremely painstaking in comparison to routine salt-marsh mosquito identification. At times of heavy collections the laboratory is taxed to the limit.

The laboratory identified 9514 adult and 4 larval collections containing a total of 680,046 adult and 49 larval specimens respectively for the regular light trap program. Although the bird baited trap program was gradually curtailed, as previously explained, a total of 12,892 specimens from 960 collections were identified from samples taken in 24 counties from January to December.

The identification, pooling and processing of live mosquitoes for encephalitis virus studies was continued this year. A total of 794 collections from 729 CDC light trap nights, 56 bird-baited trap nights and 9 sweep net collections containing 119,364 live mosquitoes (the dead discarded) was collected from 25 counties. The mosquitoes collected were brought into the entomology laboratory alive, identified and grouped into pools of usually 26 to 60 specimens of a single species.

Eleven of the counties had no pools positive for encephalitis. These counties and the number of mosquitoes identified were as follows: Dade, 3155; Hardee, 2464; Highlands, 2359; Jackson, 196; Levy, 4570; Okaloosa, 272; Orange, 1388; Osceola, 498; Putnam, 691; St. Johns, 121; and Wakulla, 142.

At the time this report goes to press 2170 pools have been processed by the Jacksonville SBH virus laboratory, and 61 positive virus isolations in 14 counties obtained.

The counties with positive pools and the details concerning the virus type, species of mosquito concerned, number of live mosquitoes identified, and geographical locations of each virus are presented in Table No. 5.

This is a cooperative project involving both Entomology and the Jacksonville virus laboratory. (See section on Laboratory Services elsewhere in this report.)

**Midge Studies**

During 1965 33 collections containing 2961 live chironomid larvae were taken. Each larva was placed into an individual vial to rear, and a total of 678 adults emerged. This work is a continuation of a study of the life history and ecology of the Chironomidae of Florida, supported by a research grant from the National Institutes of Health.

Twenty collections, containing approximately 1150 insects, chiefly *Culicoides*, were identified to species for the West Florida Arthropod Research Laboratory.

The Midge Research Laboratory at Winter Haven, submitted 96 collections with more than 205,000 insects, mostly *Glyptoteipes paripes* and Chaoborinae. These were identified by checking an aliquot of each collection.

In addition, 21 collections of miscellaneous Diptera were identified for private individuals, Bureau of Plant Industry, U. S. Quarantine Station at Miami, and the University of Florida.

## TABLE 5

## ARTHROPOD-BORNE VIRUS ISOLATIONS FROM MOSQUITOES, FLORIDA, 1965

| Mosquito species | COUNTIES | | | | | | | | | | | | | | Total number of pools by species | Number of mosquitoes identified by species |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Alachua | Bay | Charlotte | Citrus | Clay | Duval | Franklin | Gulf | Jefferson | Leon | Madison | Marion | Polk | Walton | | |
| *An. crucians* | 1B | | | | | 6B | 1B | | | | 6B | | 2B | | 16 | 15236 |
| *A. atlanticus* | 3C | 2C | | | 2C | 7C | | 3C | | | | | 1C | 3C | 21 | 5650 |
| *A. infirmatus* | | | | 1C | | | | | | | | | 1C | | 2 | 6017 |
| *A. taeniorhynchus* | | | 1C | | | | | | | | | | | | 1 | 2407 |
| *Aedes spp.* | | | | | | | | | | | | | 1C | | 1 | 1547 |
| *C. nigripalpus* | | | | | | 1H | | | | | | 1H | 1C | | 3 | 54608 |
| *Cs. melanura* | 1W<br>1H | 1H | | | | 1B<br>2E<br>2H | | 1E | 1E<br>1H | 1C | 1W<br>2E | | 1E | | 16 | 7371 |
| *P. confinnis* | | | | | | | | | | | | | 1B | | 1 | 1654 |
| Total positive pools by county | 6 | 3 | 1 | 1 | 2 | 19 | 1 | 4 | 2 | 1 | 9 | 1 | 8 | 3 | 61 | |
| Number of mosquitoes identified by county | 1825 | 1456 | 2744 | 2608 | 1500 | 16842 | 798 | 815 | 9420 | 3719 | 9066 | 3876 | 47519 | 1320 | | |

Letter and number designate positive pools:
W = Western Encephalitis
E = Eastern Encephalitis
C = California Complex
B = Bunyamera Group (probably Tensaw)
H = Hart Park like virus

## TABLE 6

### SUMMARY OF PEST CONTROL REGISTRATION AND ENFORCEMENT, FLORIDA, 1961-65

| Registration | 1961 | 1962 | 1963 | 1964 | 1965 |
|---|---|---|---|---|---|
| State Board of Health Licenses issued | 274 | 296 | 311 | 329 | 338 |
| State Board of Health Change of Address Licenses issued | 29 | 33 | 34 | 44 | 41 |
| State Board of Health Licenses revoked* | 0 | 0 | 2 | 1 | 0 |
| State Board of Health Licenses placed on probation* | 1 | 0 | 0 | 3 | 2 |
| Pest control certificates revoked, suspended or placed on probation* | ..... | ..... | ..... | 3 | 2 |
| Employees' Identification Cards issued | 2,818 | 2,996 | 3,391 | 3,588 | 3,910 |
| Employees' Change of Address Identification Cards issued | 136 | 145 | 160 | 237 | 283 |
| Employees' Identification Cards revoked or stopped* | 0 | 7 | 15 | 10 | 12 |
| Employees' Identification Cards on probation* | 5 | 0 | 2 | 2 | 2 |
| Thermal-Aerosol Certificates of Authorization renewed* | 12 | 9 | 8 | 6 | 5 |
| **Enforcement** | | | | | |
| Homeowner complaints investigated | 94 | 81 | 82** | 83 | 92 |
| Unlicensed illegal pest control operators investigated | 35 | 21 | 11 | 19 | 31 |
| Warrants filed against unlicensed operators | 15 | 5 | 5 | 9 | 6 |
| Letters of warning issued to unlicensed operators | 10 | 9 | 4 | 9 | 14 |
| Enforcement miles traveled (Jacksonville office only) | 18,222 | 16,865 | 17,107 | 18,608 | 19,427 |

*By Pest Control Commission of Florida

**Corrected from 1963 report

Licenses, identification cards and thermal-aerosol certificates issued are based on 1964-65 licensing year. All other entried are based on calendar year 1965.

## PEST CONTROL

The bureau continued for the 18th consecutive year its responsibility for licensing and issuing employee identification cards to firms engaged in the business of pest control, and enforcing the law and regulations governing this industry (see Table No. 6). In April the State Legislature amended Chapter 482, formerly the Structural Pest Control Act, enacting the Pest Control Act and providing for a new category known as "lawn and ornamental pest control." Other significant changes effected by the act include increasing the license fee; changing the name of the commission from Structural to Pest Control Commission; increasing penalties for violation of both the law and regulations; directing the board to promulgate regulations for the protection of health and safety of pest control employees and the general public, in conformity with the act, by requiring that all pesticides be used only in accordance with the registered label; and, at long last, fixing certain criteria for certified operators "in charge of" pest control activities of a business.

As required by law, public hearings were held on September 13 and November 12 to consider complete revision of Pest Control Regulations. New regulations were adopted by the board on December 5, filed with the Secretary of State on December 10, and will become effective January 21, 1966.

The number of regular licensees and employees' identification cards issued increased by 2.7 and 8.9 per cent respectively over 1964. The number of investigations of property owners' complaints, involving licensees, increased 10.8 per cent over 1964, while investigations of unlicensed operators increased by 63.2 per cent. The Pest Control Commission recorded 864 certificates in force and issuance of 386 new certificates during the year.

## ENTOMOLOGICAL RESEARCH CENTER

The supplementation of state funds by U. S. Public Health Service research grants took a new administrative direction in 1965. This year was the first in which all entomological research at this center was supported by a program-project grant (Al—06587) from the National Institute of Allergy and Infectious Diseases. This broad program is entitled "The Natural History of Mosquitoes" and is subdivided into seven projects, each of which is treated separately in the following report. The one remaining individual Public Health Service research grant is CC—00101, entitled "The Biology of Salt Marsh Larvivorous Fishes" and its progress is reported under Project 8.

### PROJECT 1: BITING CHARACTERISTICS

This project will explore the biting behavior of mosquitoes by performing precipitin tests on the blood meals of specimens collected in areas where the land vertebrates are routinely censused. It was started by collecting fresh vertebrate sera and preparing antisera in rabbits and chickens. Antisera for the recognition of the principal groups of Florida mammals were easily accumulated, but a similar bank of antisera to identify the various orders of birds has been delayed by difficulties in obtaining enough live specimens of representative species. Precipitin tests which have been made with the prepared antisera indicate that the techniques being used are entirely satisfactory.

Progress in the field work has required the development of new traps and methods of collecting. This knowledge will be especially useful when it is necessary to obtain more specimens of the same animals.

A special test of methods of storing mosquito blood meals has been undertaken to study the following factors: time since feeding, pinning versus sealing in gelatin capsules, various conditions of temperature and humidity, and, especially, duration of storage.

### PROJECT 2: POPULATION DYNAMICS

Comparisons were made between collections of mosquitoes taken by non-attractant (truck trap, suction trap and power aspirator) and attractant (New Jersey light trap, bait trap and human landing rate) samplers. The data from the non-attractant samplers were used as a base to establish levels of light activity. Comparisons with attractant methods showed that *Aedes taeniorhynchus* and *Psorophora confinnis* prefer to fly in open areas while *Aedes infirmatus* prefers wooded areas. *Culex nigripalpus* occurs freely in both types of areas.

Ovarian examinations were made on all collected material. Most *C. nigripalpus* and *P. confinnis* taken were found to be in egg stage I, while most *A. taeniorhynchus* were in stage II. Stages III and IV were taken in largest numbers by the power aspirator (as were most blood-engorged), operated only by day over the ground-litter resting places. This implies that little flying is done during these stages when eggs are maturing after the blood meal. Truck traps and suction traps took more gravid (stage V) females than attractant traps, indicating that neither hosts nor light are especially attractive to gravids. Gravids were taken primarily during the twilight periods, few being taken during the middle of the night, suggesting a preference for oviposition at those times.

The parous rate among females did not appear to vary during the night. However, larger numbers of nulliparous females of both *A. taeniorhynchus* and *C. nigripalpus* were taken by the truck trap and the landing rate station than by other methods. This suggests that nullipars range more freely and attack more readily than older females.

## PROJECT 3: DISPERSAL CHARACTERISTICS

### (a) A migratory species

The care and management of the nursery plots for salt-marsh egg production has proceeded as usual. A very high egg deposition had been maintained throughout most of the summer by scheduled flooding the swales with brackish water. The electric pumping system for water level control (in relation to attraction for ovipositing females) has been improved by installation of automatic float switches to control rain and tide seepage. The dikes at some points need raising to prevent hurricane tides from flooding out egg supply. The hurricane in September flooded out the egg supply but a large brood of females has replaced it. Three towers have been installed for raising nets to a height of 50 feet for exodus studies. Also improvements were made in the heat-controlled rearing trough. Attempts were made at controlling fiddler crabs, *Uca* Spp., and minnows in the plots. The greatest aid towards this end will be an artesian well which will provide water of a lower salinity.

No actual experimentation with *A. taeniorhynchus* dispersal was undertaken during the year because of lack of supervisory personnel. Analysis of data from an as-yet unreported exodus experiment in mid-March 1964 yielded several meaningful conclusions. This was primarily a technology-testing experiment and several departures in exodus-recording technology were proven effective. (1) Feeding a colored sugar-solution to the newly-emerged adults worked well and gave strong evidence that more of the fed than the unfed take part in the twilight migratory exodus and that the unfed took off earlier. (2) Time-lapse photography with newly designed exodus cages succeeded in pin-pointing the twilight migratory exodus to from 10 to 25 minutes after sunset. (3) Stationary nets demonstrated their high selectivity for migrants and proved that at wind speeds under three miles per hour the exodus is upwind while at wind speeds over three miles per hour the exodus is down wind and over a narrower sector the greater the wind velocity.

### (b) A non-migratory species

In July and August of 1965, the dispersal and longevity of *C. nigripalpus*, a non-migratory species, were studied by marking reared specimens with radioactive phosphorus and externally applied dusts. Each different dust or combination of two dusts was used for the releases made on two successive nights and was not repeated within three weeks. An average of more than 3000 females with internal and external marking was released each night for 36 days, and then, on the two days following, there were final releases consisting of about 14,000 females marked only with phosphorus and about 15,000 marked only with dust. Collections to recover the marked mosquitoes were made with CDC miniature light traps placed in pairs at half-mile intervals on three radii each extending three miles from the release point.

Some of the findings are still tentative because the markings, both internal and external, were not entirely satisfactory, and because the examination of the collections is not yet complete. The released specimens spread at least three miles in each direction, and the rate of dispersal, as shown by the day on which the collecting sites first became positive for recoveries, was 0.57 miles per day.

The problem with regard to the internal marking arose from the use of too high concentrations of the radioisotope. The dosages which were selected to offset a 29 per cent loss in radioactivity observed when females oviposited in the laboratory, apparently prevented normal development of the ovaries and delayed oviposition.

The problem with regard to the external marking was the excessive loss of dust before recapture and the resulting possibility that, in many cases, a mosquito had lost its second marking. On the other hand, the amount of information provided by the external markings justifies a thorough study of the best way to attach them to a mosquito. It is through the recovery of specimens of known age that longevity data are best obtained, and this knowledge will lead to a better understanding of the infectivity of populations in the field.

### (c) Migratory versus non-migratory dispersal

Four large-scale investigations conducted in 1951-55 on the dispersal of the migratory salt-marsh mosquito, *Aedes taeniorhynchus*, were made the subject of a comparative study. There were found to be marked differences in the displacement of the released populations as well as in their maximum spread. There was also a wide range in the rate of dispersal. Investigations of *Culex tarsalis* and *C. nigripalpus* exhibited relatively slight displacement compared to that of *A. taeniorhynchus*. An analysis of dispersal based on the unmarked specimens in the recovery collections provided strong evidence that *A. taeniorhynchus* ceased to migrate within a week of adult emergence.

### PROJECT 4: COMPARATIVE BIOLOGY

Investigations conducted during 1965 were directed towards basic behavioral patterns of reproduction in *Culex nigripalpus* (Florida's SLE vector) and how these corresponded or differed from those of *Culex pipiens quinquefasciatus* and *Culex bahamensis*. The latter, an abundant species in the Florida Keys, was colonized during the year and found to lend itself readily to laboratory manipulation. Principal points of *Culex* studies were: insemination of female and its effect on avidity for the blood meal, effect of insemination on oviposition and space and light requirements for mating. Copulation was stimulated in refractory species by introducing another species which mates readily in flight under laboratory conditions. Tests with *C. nigripalpus*, using *A. taeniorhynchus* as the "stimulating species," resulted in increased mating. Other species were ineffective as stimulators for *C. nigripalpus*.

Diets were developed for rearing maximum numbers of *C. nigripalpus* larvae with maximum synchrony of pupation. Late in the fourth instar, it was found that three times the usual number of larvae could be crowded together for radioisotope (p$^{32}$) marking without appreciably reducing the synchrony of pupation. Larval diets were also developed in relation to effective crowding for conservation of space and time in manipulation for: *Culex pipiens quinquefasciatus*, *C. bahamensis*, *Aedes sollicitans* and *A. vexans*.

Survival studies on stored reserves at emergence were initiated for wild grown *A. taeniorhynchus*. The investigation will be expanded to include several other species. Seasonal vector sources were studied in relation to mosquito population survival in the field.

Further ethnological observations were made on the crab-hole mosquito, *Deinocerites cancer*, in anticipation of early publication of studies on this species made during the past several years.

A catalogue of the 35 mosquito species reared in this laboratory was prepared, with an analysis of progress in the various steps leading to eventual colonization. The analysis stressed the points of procedural weakness, with a view to leading as early as possible to efficient colonization.

### PROJECT 5: REPRODUCTION

Comparative studies on the endocrine system of *Aedes* have shown that the medial neurosecretory cells (mnc) and the corpora allata are both essential for egg maturation. Transplantation of corpora allata into a host mosquito from which the mnc had been surgically removed or implantation of mnc into an allatectomized female showed that the mnc and corpora allata were not interchangeable. Therefore, each must have some essential function unrelated to the other. The timing of mnc-ablation was as critical as that of allatectomy. The percentage of *taeniorhynchus* and *triseriatus* which matured eggs after mnc-ablation increased when the operation was performed on older females. Extirpation of the mnc did not prevent digestion or absorption of the blood meal because as much triglycerides were synthesized by mnc-ablated females as by unoperated controls which were fed the same amount of blood. Several species took notably larger blood meals from unoperated animals. The lack of effect of mnc-ablation on protein ingestion and on digestion in mosquitoes appears to differ from what is reported for blowflies and other insects.

An anatomical study of the neuroendocrine system of *Aedes* is underway utilizing both dissection and histological staining techniques, specific for the neurosecretory cells. The objective is to trace the axons of the mnc and observe their content of neurosecretory material in different animals and under controlled physiological conditions.

In addition to its influence on egg maturation, the endocrine system has been shown to control insemination. The age at which a normal *A. aegypti* female becomes inseminated during mating has been established and compared among four strains. Extirpation and implantation experiments have demonstrated that the corpora allata in some way regulate insemination.

### PROJECT 6: GROWTH

In addition to temperature and food, larval development in *A. taeniorhynchus* is affected by the photoperiod acting through an endogenous 22-hour rhythm in terminating it as a synchronized daily rhythm of pupation. A series of experiments were performed to elucidate the photoperiod-related rhythm. It was found that maximum synchronization of a brood or population occurred on a "full ration," at a 12L:12D photoperiod, and between 29°C and 31°C; under these conditions there was but one day's burst of pupation for the whole population. Under a variety of other conditions, pupation occurred as a short to long series of daily burst or "peaks."

The main findings concerning the complex of factors affecting pupation were: (a) Minimum larval duration, at any constant temperature, was the same on full or quarter rations, feeding at 24-hour or two-hour intervals, in continuous darkness or on a 12L:12D photoperiod, but was five to six hours longer in continuous light. (b) Different photoperiods have only a slight effect on the first three larval molts, as the intervals between successive molts vary with temperature only. (c) Under continuous darkness or continuous light and on full rations, only one long skewed peak of pupation occurs. (d) Under continuous darkness, at quarter ration, and with feeding at two-hour intervals, pupation occurs in a series of peaks at 22-hour intervals; this is the first demonstration in an insect of an endogenous circadian rhythm expressed without environmental cue or entraining. (e) At quarter ration and 12L:12D photoperiod, three to four pupation peaks occur at 22-hour intervals, and these occur even when all light is excluded from the time pupation first appears.

The morphological and physiological status of mosquitoes at emergence is the result of larval nurture. Studies to relate larval diet, density, temperature and photoperiod to adult characteristics at emergence showed that adults obtained from larvae reared under 12L:12D on full ration but having different larval rearing temperature (24°-34°C) were different in their physical and chemical compositions, at the different temperatures and between emergence peaks at the same temperature. Dry body weights, total fats, glycogen, trehalose and autogeny were maximum at 30°C, showing an apparent correlation with the maximum synchronous development of pupae. However, thorax length, wing length and hind femur length were completely temperature dependent showing a low decrease in their measurements from 24°-34°C.

The effects of different temperatures on the physical and chemical constitutions of the newly emerged adults show that tremendous changes take place during the pupal stage. In males, total lipids, glycogen and dry weights were maximum at 30°C, but some distinct differences in these constituents were observed at different temperatures in the females.

## PROJECT 7: ENERGETICS

For the isolation of total glycogen from animal tissues, most investigators favor a modification of Pfluger's method. The procedure, however, yielded low and unreproducible results when applied to small quantities of glycogen. Therefore, each step of the procedure was reinvestigated. Quantitative isolation of as little as 1 *ug* of glycogen has been achieved. Furthermore, although analytical methods exist for determination of small amounts of sugar, glycogen and lipids, no methods appear to be available for separation of these materials when present in the same biological system. For studies of the metabolism of glycogen and triglycerides in carbohydrate-fed insects, a method was devised to separate mixtures of sugars, glycogen and lipids.

Certain cold-blooded animals take meals in excess of their body weight and, without obligation to maintain constant body temperature, may convert a measurable portion of the chemical energy in a single meal into caloric reserves. Mosquitoes appear to be uniquely suited for such energy-balance studies. This problem was investigated by determining the growth and decline of the total glycogen and fat pools, produced at constant temperature by different quantities of sugar-fed individual mosquitoes. It was found that the fat pool grows in proportion to the sugar meal, but that glycogen reaches a maximum in 8-12 hours, independent of the amount of sugar fed. The rate of fat synthesis was similar whether sugar or calorically equivalent amount of protein was fed, but glycogen was synthesized ten times faster from sugar than from protein.

This information was used to study the role of the neurosecretory system in glycogen and triglyceride metabolism. It was concluded that in the female fed sugar, the medial neurosecretory cells of the brain restrict synthesis of glycogen from sugar and stimulate fat synthesis. Surgical removal of these cells greatly increased the storage capacity for glycogen at the expense of fat storage.

In cold-blooded animals, the rate of many physiological processes is temperature dependent. A measurable chemical reaction was followed, i.e., the rate of synthesis of glycogen and fat from a single dose of sugar, in a temperature range (10°C to 35°C) where no excessive mortality was caused by heat or cold exposure. The rate of fat synthesis was temperature dependent at all experimental temperatures. Glycogen synthesis was temperature dependent between 35° and 22.5°, but independent of temperature between 10° and 22.5°.

In another experiment designed to study the effect of temperature on the composition of newly synthesized triglyceride fatty acids, the results in mosquitoes did not support the hypothesis that depot fat is more unsaturated when synthesized at low temperatures.

## PROJECT 8: BIOLOGY OF LARVIVOROUS FISHES

This project has to date concerned itself with the biology of the larvivorus fishes of the salt marsh. Studies of the feeding habits of these fishes, including their predation on mosquito larvae, have pointed up the necessity to understand the whole ecology of the salt marsh. Such an ecological understanding would, of course, not only give the context for predation by fishes but would give the context for mosquito larval feeding habits as well, and also depict the environment within which mosquito parasites, diseases and predators must also operate.

The current year's work therefore comprised (1) the launching of a new study on the productivity of the high subtropical marsh,

(2) the bringing to near-completion of a study of the reproductive biology of the larvivorous fish, *Rivulus marmoratus*, and (3) the preparation of several manuscripts for publication on *Rivulus* and on the food habits and reproductive cycles of other larvivorous species.

## WEST FLORIDA ARTHROPOD RESEARCH LABORATORY

Owing to delays in the building of new facilities not anticipated when the 1964 *Annual Report* was prepared, this laboratory was still in temporary quarter at the U. S. Navy Mine Defense Laboratory, Panama City, at the end of 1965. It is now anticipated that the new facilities will not be ready until February 1966.

Although the limitation of temporary quarters and unfilled staff positions were significant handicaps, some progress toward the objectives of the laboratory was made during 1965 which are discussed below:

### DOG FLY STUDIES

During late 1964 and early 1965 personnel made an evaluation study of the equipment and procedures used for the control of the stable fly or dog fly, *Stomoxys calcitrans*, in West Florida. The objective of this evaluation and of the research on this insect during 1965 was to provide local authorities with more effective tools for control of this pest at the earliest possible time.

This vicious, bloodsucking fly is prevalent on the shores of bays and on the Gulf beaches in West Florida during late summer and early fall, which is the principal tourist season in this area. A meeting of all fly control districts was held at the laboratory on January 28, 1965, at which time detailed recommendations were made for improving the effectiveness of methods currently used for control of this pest.

Extensive tests with insecticidal thermal aerosols (fogs) for control of adult dog flies were initiated in April, 1965. These tests, which utilized flies from the laboratory colony, quickly revealed that the formulations of Dibrom used effectively for mosquito control were not adequate for control of dog flies. Subsequently, it was found that 3½ ounces of Dibrom per gallon of diesel oil applied in the standard operation of 40 gallons per hour, five miles per hour or at 80 gallons per hour at 10 miles per hour, gave good kills of adult dog flies. The data are shown in Table 7. This information was made available to all dog fly control districts via a memorandum issued by the Bureau of Entomology on June 1, 1965.

The standard method for control of dog flies in West Florida during the past 20 years has been the spraying of DDT emulsion on windrows of marine grasses along the shores of the large bays. These grass deposits comprise the principal known source of dog flies in this area. All available information indicates that DDT emulsion spray is still effective in reducing the numbers of dog flies produced in these grass deposits, if done according to recommendations.

## TABLE 7

RESULTS OF CAGE TESTS OF THERMAL AEROSOLS
OF DIBROM AGAINST THE DOG FLY,
STOMOXYS CALCITRANS, FOUR REPLICATIONS EACH TREATMENT,
FLORIDA, 1965

| Formulation[1] (Oz./gal.) | Volume (gal./hr.) | Vehicle Speed | Per cent kill in 24 hours |
|---|---|---|---|
| 1-3/4[2] | 40 | 5 | 55 |
| 1-3/4 | 40 | 5 | 70 |
| 1-3/4 | 80 | 5 | 90 |
| 3-1/2 | 40 | 5 | 96 |
| 3-1/2 | 80 | 10 | 96 |

[1] Ounces of actual Dibrom per gallon of diesel oil.

[2] These tests conducted from 10:00 a.m. to 4:15 p.m.; all other tests conducted from 4:30 p.m. to 8:00 p.m.

One of the planned objectives of the dog fly studies during 1965 was to evaluate the effects of rainfall on DDT sprays applied to marine grass deposits. It was requested that officials of the control districts advise the laboratory when grass deposits suitable for testing were found in their respective areas. But as the season progressed, no grass deposits were reported for this purpose. Therefore, laboratory personnel started surveys in August to find suitable sites for these tests.

Between August 13 and October 15, field plots were established five times either in natural grass deposits or in grass that was gathered for this purpose. In each instance, hurricane or storm tides destroyed or damaged the plots before significant data were secured. Much of the misfortune encountered with this type of testing in 1965 was due to inexperience with local conditions and cooperative working arrangements with local authorities. With experience gained in these areas during 1965, it is expected that research on the spraying of grass deposits will be more fruitful during 1966.

There is a desperate need for a fast, effective method of abatement when hordes of adult dog flies suddenly invade many miles of the Gulf resort beaches in West Florida. The airplane seems to offer the only hope of providing a solution to the problem under these circumstances. With this objective in mind, tests were begun in August, 1965, to determine an effective aerial spray operation against this pest.

Initial tests were conducted on the municipal airport at Marianna, using caged flies from the laboratory colony. Dibrom was applied in emulsion formulation with a 235 h.p. Piper Pawnee airplane. Caged flies were placed in two plots, one on an open grass strip and one in an adjacent wooded area. Results of these tests are shown in Table 8.

### TABLE 8

### RESULTS OF TESTS WITH AERIAL SPRAYS OF DIBROM AGAINST CAGED ADULT DOG FLIES, FLORIDA, 1965

| Swath in Feet | Dosage/acre |  | No. Tests | Per cent kill |  |
|---|---|---|---|---|---|
|  | Volume | lb. toxicant |  | Open | Wooded |
| 200 | 1 qt. | .14 | 2 | 100 | 99 |
| 400 | 1 pt. | .07 | 3 | 97 | 85 |

Owing to the high rate of kill in the open plot with the 400-foot swath, this operation was tested against natural populations of dog flies on the beaches at Panama City, one test in October and one in November, 1965. In the first of these tests, conducted October 22, caged flies were used in addition to the natural population, the latter being sampled with traps before and after treatment. In this test, 88 per cent of the caged flies were killed by the treatment but no valid data were obtained on the effect of the spray against the natural population. Northerly winds bring dog flies to the beaches along the Florida Panhandle and southerly winds apparently cause the flies to disappear rather suddenly; presumably the southerly winds take the flies back to the bays, or beyond, which lie north of the beaches. Within a few hours after the tests, both in October and in November, the wind changed from a northerly to a southerly direction and flies disappeared or were greatly reduced in numbers, both in untreated plots and treated plots. Therefore, no meaningful data were obtained from either of these tests as to the effects of the spray on natural populations.

During July, 1965, the West Florida Arthropod Research Laboratory was awarded a research contract by the U. S. Department of Agriculture in the amount of $85,000 for conducting tests with insecticides against dog flies. Owing to administrative delays in authorizing employment of personnel and acquisition of equipment, this contract work was not fully activated during 1965. It is hoped that a full complement of personnel and required equipment will be available to permit this project to reach maximum activity during 1966.

In general, the dog fly problem was reported to be less severe in 1965 than in any previous recent year. There were no significant outbreaks of this pest on the Gulf beaches of Bay County until October, which is past the peak tourist season. However, reports from some of the other counties indicate that small outbreaks did occur as early as August in some areas. There was a small outbreak in August on the shores of St. Andrews Bay, but these flies never reached the Gulf beaches in significant numbers.

The efforts of the fly control districts in following the recommendations of the laboratory ranged from good to poor, some reporting inadequate budgets for purchase of recommended equipment. It is estimated that the overall budget for control of dog flies in West Florida should be three times the present amount of $36,000. Under these circumstances, it would be difficult to assess the effects of the control effort on the generally favorable fly situation in 1965 prior to October.

The spraying of marine grass deposits was discontinued on or about October 1, 1965, by the control districts. Investigation revealed that it is "traditional" to terminate the spraying of the marine grasses on October 1. The only major outbreak of dog flies during the 1965 season commenced during the third week in October and continued into November. On October 25, one trap operated by this laboratory caught 543 dog flies on the Bay County Gulf beaches in two hours 48 minutes.

It is not possible [illegible] state firmly that this major outbreak resulted from the termination of control activities on October 1. However, the weather was mild during October and the outbreak started about two to three weeks after control operations ceased, which is the normal development period for dog flies. This is strong supportive evidence that this outbreak might have resulted from the cessation of control activities, but no other data are available to confirm this. This laboratory was not consulted about the termination date for spraying marine grasses in 1965, but a memorandum was issued through the Bureau of Entomology in late October recommending that control operations continue at least until November in future years.

## MOSQUITO STUDIES

During the summer of 1965 the first apparently bona fide report of mosquito resistance to Malathion in Florida was received from Lee County. An immediate collection of adults and larvae from several areas in this county was made and the subsequent tests conducted with these mosquitoes revealed a 10 to 30-fold resistance in *A. taeniorhynchus* larvae.

Therefore, over a period of the next few months adult mosquitoes were collected from 20 different areas in eight different counties. Although the tests are still in progress, the results indicate a definite resistance to Malathion on Sanibel and Captiva Islands in Lee County, on the Keys in Sarasota County and possibly on the mainland of Lee and Brevard Counties. Tests completed to date do not indicate any significant change in susceptibility of *A. taeniorhynchus* larvae from Indian River, Martin, Volusia or Hillsborough Counties.

This past year considerable time was spent in an attempt to establish laboratory colonies of *A. taeniorhynchus* and *C. nigripalpus* by means of techniques presently used at the Entomological Research Center. Since *A. taeniorhynchus* is the most important pest species and *C. nigripalpus* is the most important vector of St. Louis encephalitis in Florida, establishment of colonies of these two species is necessary to insure sufficient numbers of these mosquitoes for research requirements.

There was a continuation of the study designed to further the knowledge of particle size as it relates to insect control. Both laboratory and field studies were conducted. The laboratory studies are concerned with the deposition of particles on insects through the use of a laboratory thermal aerosol generator developed as a result of this study. Recent results have shown that the droplet deposition on insects is affected by the type of oil used in producing the aerosol. The field studies are concerned with the effects of wind, discharge rate, distance from discharge, and so forth, on particle size as produced by commercial thermal aerosol generators. Recent studies have shown a reduction in the size and number of particles larger than five microns with distance and inside screen cages of the type used in adulticide studies. Although it has been demonstrated previously that the major portion of the droplets in insecticidal fogs is made up of droplets smaller than five microns, the relative importance of the large and small droplets has yet to be proven.

Attempts were made at calibrating a rental aircraft for the dispersal of concentrate sprays against adult mosquitoes. Much time, effort and funds were expended traveling to and from Marianna where the airplane used in this work is based. Efforts to calibrate this plane were unsuccessful because the discharge rate was not consistent between tests. This presumably was due to the equipment on the airplane, which was not satisfactory for dispersing such small quantities as one-half to three ounces per acre.

It is expected that this laboratory will acquire its own airplane soon. This will greatly facilitate the research and development work with aerial sprays, including concentrate sprays.

### Sand Fly Studies

Based upon successful control of sand fly *(Culicoides furens)* larvae in small-plot tests at Vero Beach with coal tar creosote emulsion (See 1964 *Annual Report*), this chemical was tested on a larger scale against *Culicoides* in the Panama City area during 1965.

The creosote emulsion was applied with power equipment to a bay shore, canal banks, and a small salt marsh at the rate of eight gallons of toxicant in a gross volume of 220 gallons per acre. The test plots totaled 3.8 acres in size. Larval counts and light trap collections of adults before and after treatment showed poor results.

Since the dosage of creosote emulsion used in this test was effective against *C. furens* at Vero Beach in similar habitats, it was reasoned that the failure of this material in West Florida might be due to a difference in species susceptibility and/or conditions of the habitat. Accordingly, laboratory tests were conducted to study effects of salinity, which appeared to be less in St. Andrews Bay than in the Indian River, and species differences. Results of the salinity tests are shown in Table 9.

## TABLE 9

### EFFECTS OF SALINITY ON THE KILL OF CULICOIDES LARVAE WITH COAL TAR CREOSOTE EMULSION, THREE REPLICATIONS EACH TREATMENT, FLORIDA, 1965

| Toxicant Concentration (Parts per Million) | Per cent larval mortality at Indicated water salinity (parts per thousand) | | |
|---|---|---|---|
| | 17.8 | 19.3 | 34.8 |
| 10 | 23 | 47 | 100 |
| 30 | 60 | 97 | 100 |
| 60 | 100 | 100 | 100 |
| Check | 0 | 0 | 0 |

In these tests, there was a definite trend toward a higher kill with increased salinity at the lower dosages. Whether or not this factor is as important under field conditions as these limited data indicate remains to be confirmed.

In the species tests, larvae of *C. furens* were collected at Vero Beach and compared with larvae of *C. hollensis*, the dominant species in Bay County. Results showed no significant difference in kills of the two species with the creosote emulsion; therefore, species difference in susceptibility, at least between these two dominant species, is not considered an important factor in the results of the 1965 field tests. Species identification in these tests, as in all tests of sand flies, were made by rearing samples of the larvae to adult stage.

Coal tar creosote emulsion and other prospective larvicides will be tested in small plots at Panama City during 1966.

Two light traps were operated during most of 1965 in the Panama City area. Species collected were: *C. hollensis*, *C. haema-*

*topotus, C. crepuscularis, C. villosipennis, C. stellifer, C. biquttatus, C. piliferus, C. mellus* and *C. furens.*

## WINTER HAVEN MIDGE CONTROL LABORATORY

This year has been the most fruitful one as far as research is concerned since the laboratory's inception nine years ago. Because of the success achieved in controlling *Glyptotendipes paripes* Eds. through the use of insecticides, more emphasis has been placed on basic life history studies of chironomid midges. Tentative studies were initiated in the area of pathology of chironomids as a possible ultimate means of biologically controlling these insects. Continuation of the limnological studies of lake hypereutrophication were carried out this past year aided by a PHS grant.

### RESEARCH ON CONTROL OF LAKE PRODUCTIVITY

#### A. Nutrient Reduction by Water Hyacinth Harvest

As a continuation of the hyacinth experiments 10 commercial swimming pools, 10 feet in diameter and 30 inches deep with vinyl liners, were set up in the Lake Alfred-Minute Maid area. These pools were used due to the ease of installation and maintenance following the difficulties encountered with the use of polyethylene sheets in ground excavations. Each pool was filled with water from a shallow well, treated with four pounds of Milorganite and 20 grams of hydrated lime; three days later, four pounds of hyacinths were introduced within a tygon-tubing ring encompassing one square meter. The ring was used as visual aid in estimating growth for harvesting purposes.

Three days after fertilization chironomid egg masses were common in all polls *(Chironomus fulvipilus* and *Chironomus attenuatus)*. Seven days after fertilization *Culex* egg rafts and numbers of *Culex* larvae were noticed in all pools except those which were rich green and full of bubbles. On this date several *Gambusia* were added to each pool. Within three days no *Culex* larvae could be found.

The hyacinths were harvested when they had multiplied to fill the tygon ring in each pond. On July 28 one-half of the hyacinths were removed, drain-dried and weighed. Following further air drying, aliquots of the hyacinths were analyzed for nitrogen and potassium. The remaining dried hyacinths from the ponds used as controls were ground in a Wiley Mill and returned to their respective ponds so that the nutrient level in these ponds would remain constant.

The harvest and removal of hyacinths apparently decreases the hyacinth productivity. Temperature and/or light changes during the season also may influence the plant productivity. Analysis of the plant tissue indicate that the cessation of hyacinth growth was accomplished by the removal of only one-fifth of the nitrogen and potassium originally introduced.

Starting in the middle of September, pools No. 1 and 3 each received 10 gm. of Milorganite per day to stimulate nutrient addition to natural waters. This was an attempt to see to what extent the hyacinths could remove nutrients from the water. So far there has been no apparent effect, perhaps due to seasonal changes.

#### B. Nutrient Reduction by Aeration (to Keep Nutrients From Cycling Within the Lake)

The aeration of Big Lake Tangerine was continued during this period and Little Lake Tangerine and Lake St. Claire were continued as control studies.

The selected factors studied were pH, acidity, alkalinity and productivity (light-dark bottle method) bi-weekly, conductivity and DO weekly, and secchi and temperature three times a week. The greatest difference appears to be in the dissolved oxygen distribution; the DO is more equally distributed after aeration without the extremes generally encountered in the other lakes. However, the extremes were not as great for any factor in 1965 as in 1964 in any of the three lakes.

### CONTROL STUDIES

Through the cooperation of the officials of Polk County, the realization of a successful midge or "blind mosquito" control program is much closer. From the $30,000 allocated to the County Arthropod Control Department to work in cooperation with this laboratory for the development of a practical control program a tremendous amount of data has been obtained. The following is a brief summation of the more important findings.

Fenthion (Baytex), the one per cent sand granular formulation which had been tested successfully in previous years, was found to give an excellent initial larval control under a wide range of conditions with no overt detrimental side effects to other aquatic organisms. Unfortunately, due to apparent limnological changes in the lakes during the summer and changes in the rate of development of the midge *G. paripes* in the warmer seasons, the residual effectiveness of the fenthion treatments varied a great deal depending on the time of application. When the material was applied in March, adult midge control was achieved for almost two and one-half months. In June this same application gave adult midge control for less than one month. The October treatment applied at the same dosage rate gave control for approximately a month and a half. Thus, it now appears that for the cost involved, it is impractical to use fenthion as a midge larvicide in the summer and probably in the fall. In the spring the rate of development per generation of *G. paripes* is approximately 40-45 days, while in the summer it is less than 21 days. The bloom of blue green filamentous algae during the summer months also appears to interfere with the residual effectiveness of all larvicides.

Aerial applications of the granular insecticide were found to be the most practical for large lakes. For smaller lakes or spot treatments the material can be applied by a Buffalo turbine mounted on a boat, although this method is not as accurate as the aerial one.

By carefully marking the lake for the plane's swaths, the amount of formulated insecticide necessary to achieve satisfactory midge control can be reduced to ten pounds per acre from the original recommendations of 20-25 pounds per acre. This cut seems to shorten the residual effectiveness of fenthion by about a week. Further reductions in the amount of toxicant used can be made in some lakes and still maintain satisfactory midge control by treating only those portions of the lake bottom which breed midge larvae in large numbers. This type of treatment calls for a careful larval survey of each lake and an adequate marking system which can be easily distinguishable from the air. In most of the lakes in Polk County, unfortunately, the larvae are found breeding in all the sand and sandy-muck bottom areas of the lake; therefore, it was found, in many such cases, less expensive to treat the entire body of water than to try to mark out and treat only the breeding areas of the lake. It was also found that treating groups of interconnected lakes at one time did not greatly prolong midge repopulation. All the lakes in this area breed *G. paripes* to some extent and it would be impractical to try and treat all the lakes just because they might serve as a possible source of midges for re-infestation.

Abate (Am. Cy. 52, 160) was applied to four lakes during the year; it gave excellent control of *G. paripes* larvae at dosages as low as 0.05 pounds per acre of the technical material. This compound was applied in a one per cent sand granular formulation. There were no detrimental side effects to the aquatic biota from these lake treatments with Abate. This chemical has not been given federal clearance for use as a midge larvicide at this time.

A series of toxicological studies were conducted on various aquatic organisms in the laboratory with fenthion and Abate. It was found that neither fenthion nor Abate were toxic to fish at a dosage rate necessary to control the larvae of the chironomid midge *G. paripes*.

Fenthion was toxic to shrimp and amphipods at a dosage of 11 ppb which is below the level for chironomid larvae however, in the field enough of the shrimp and amphipods were able to survive the fenthion applications to repopulate the lakes. Microcrustacea and protozoa were not affected by the dosage rate required to control midge larvae.

Abate at 0.1 ppm was safe to all of the organisms tested. In the field there was no notice of mortality of any aquatic organisms such as Odonata, copepods, ostracods, *Chaoborus* or shrimp following a 0.25 pound per acre technical Abate treatment to control *G. paripes* larvae.

Lake treatments with BHC in a wettable powder formulation applied at the rate of 1.25 pounds per acre gave fair control of midge larvae in one lake and very poor control in another. Since residues of this compound were detected in the flesh of fish following analysis, no further work was carried out on this chemical. A new granular formulation of one per cent EPN gave good initial larval control of *G. paripes* applied at the rate of 20 pounds per acre, but it did not have the residual effectiveness of fenthion. It will serve as a good back-up larvicide.

Three new larvicides were tested: Malathion, Paris green and Dow M-2854. In the case of Paris green and Dow M-2854, a new formulation must be developed which will carry the chemical to the lake bottom. All preliminary tests with these three chemicals indicate that they are good midge larvicides. Toxicity studies will have to be run on them before being tried in the field.

Aerial fogging tests were conducted with Malathion as a midge adulticide. It was a complete success. In the early morning hours control was achieved within one hour. When the material was applied at 11 a.m., the rate of knockdown was slower but a hundred per cent control was achieved within three hours.

A great deal of time and effort was spent this year developing the use of low volume Malathion sprays as a midge adulticide. It was found that aerial applications of low volume concentrate sprays of Malathion when applied at the rate of two and four ounces per acre gave excellent control of *G. paripes* adults. At the four-ounce dosage rate, control was achieved within three hours and the residual effect of the spray gave control for four days. At the two-ounce dosage rate, it took almost six hours to achieve a satisfactory kill; however, the residual effect usually lasted three days. It appears that there is no difference in the initial kill when one, two or three swaths are laid down; however, there are indications that the residual action is slightly less with one swath. Of the aquatic organisms tested against the four-ounce dosage rate, none were significantly affected when the concentration was approximately 0.14 ppm. There was complete mortality of mosquito larvae and good control of midge larvae, but no mortality of the mosquito pupae at a concentration of 0.5 and 1.6 ppm of Malathion. In the field following the sprays, there was mortality of *Hippelates* eye gnats, muscoid flies, small beetles and wasps.

Calibration studies of low volume sprays indicate that four tee jet nozzles (800067 at 40 psi flown at a height of 40 feet) gave a slightly better spray pattern than two mini-spin nozzles (0.29 and

0.37) at the same pressure and flown at the same height. With tee jet nozzles a single swath width was about 320 feet in a cross wind of 4-5 mph. In a cross wind of 10 mph, the effective swath was almost 400 feet when the material was applied by mini-spin nozzles. There appears to be little change in the spray pattern when the pressure was raised from 40-48 psi or when the plane was flown at a height of 20 or 40 feet.

All the midge control research was done in cooperation with the Polk County Arthropod Control Department.

### BIOLOGICAL STUDIES OF GLYPTOTENDIPES PARIPES

Five funnel-type emergence traps were continued in Lake St. Claire, two each in Big and Little Lake Tangerine to estimate daily and seasonal abundance, and in Lake St. Claire emergence by depth and bottom type. Seasonally, spring and fall contained the greatest emergences followed by summer and then winter. For specific areas or lakes there are exceptions; for example, the traps in Little Lake Tangerine contained their greatest numbers for one month in January 1965. These studies continue to show bottom types containing predominantly sand and depths intermediate in the bottom profile are most productive of *G. paripes*.

A study comparing moon age with daily catches indicates most catches occurred during the last quarter and over the new moon period. The fewest catches were recorded the week prior to full moon.

The use of 10 egg traps in Little Lake Tangerine was continued to study daily, seasonal and depth patterns. The daily and seasonal patterns related to the emergence studies. The study of depth distribution showed the greatest majority of egg masses were recovered within 50 feet of the shoreline.

Larval samples taken in conjunction with the emergence traps related the larval numbers to emergence periods.

Dissolved oxygen studies were continued to see if low DO was related to a migration of larvae which was noted in Lake Cannon several years ago. Since in the area of study no low DO was found, and no large number of larvae was found in the emergence traps, this aspect could not be proved nor disproved.

Throughout this year the research project on the relationship between the plankton available in the lake to that found in the gut of chironomid larvae was carried out. The results of these studies indicate that basically there is a definite correlation between the kind and amount of plankton available in the lake to that found in the gut of midges throughout the year. The two main factors which seem to influence high productivity of *G. paripes* is a plentiful supply of algae and a sandy bottom lake necessary for tube building.

Laboratory and field rearing experiments were tried with various degrees of success with the midge. *Chironomus holoprasinatus*, which was formerly called *C. fulvipilus*. Life history studies indicate that this species can complete its development within a two-week period under favorable conditions. It is an algal tube builder and thus requires no substrate to sustain itself. It is found commonly in small temporary pools or in artificial containers in conjunction with *Culex* larvae.

Although the pathology studies were initiated last January, they have been neglected throughout the year due to changes in personnel. A partial survey has been made of the diseases and parasites endemic to the local midge population. Two new species of mermethid worms or nematods were identified from *G. paripes* larvae. Microsporidia of the genera *Thelohania* and *Stempellia* were isolated from midge larvae. Both fungus and bacterial infections have been observed in the larvae. At present an attempt is being made to isolate and identify the different types of bacterial diseases which are commonly found in midges.

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## BUREAU OF FINANCE AND ACCOUNTS

FRED R. RAGLAND, B.S.
Director
PAUL R. TIDWELL, B.B.A.
Assistant Director

Major responsibility rests with this bureau for the business and financial management of the agency, and includes: accounting, budgeting, purchasing, property control, duplicating services, mail, shipping, receiving, automobile control and assignment and buildings and grounds maintenance. The business and financial management requires a close working relationship with the State Board of Health (SBH) program directors in planning maximum utilization of funds that have been provided. This means sound budget preparation of the various health programs designed to cover a future period of time. Once the funds are provided and properly budgeted, then a logical system of accounting for these funds and issuance of reports concerning their expenditure is necessary. This function, along with the dissemination of proper budget control information, is accomplished by the bureau. Sometimes this activity becomes quite involved due to the complexity of the various sources of funds: federal, state, county, private, etc. Each of these fund sources bears its own set of rules, laws and regulations as to the administration of expenditure of the money.

The fiscal year ended June 30, 1965, was the second year of the 1963-65 biennium for which the 1963 Legislature made available to the agency state funds through the General Appropriations Act. These appropriations were generally based upon maintaining present programs at the same level.

Total program expenditures for fiscal year ended June 30, 1965, amounted to $32,500,000; this was $4,700,000 over the previous fiscal year. This increase can be accounted for in three program areas. Half of it was in the Indigent Hospital Program due to the Hospitalization for Public Assistance Recipients and Medical Assistance for the Aged. County health department (CHD) expenditures accounted for one-fourth of the increase and finally, the general increased cost of ongoing programs and some increase in special grants and donations accounted for the remainder.

It is important to note the ever-increasing number of special projects and grants from the federal agencies. The most significant of these continues to be the "best efforts" contract for eradication of the *Aedes aegypti* mosquito. This contract is now at a level of about $3 million per year. The duration of the project will be approximately five years.

At the close of fiscal year June 30, 1965, the number of state-owned and operated automobiles was 107. These were driven approximately 1,650,000 miles during the year. In addition, the agency owned 31 trucks or special-purpose vehicles. These units traveled approximately 235,000 miles during the year. Assignment and use of all vehicles is continually reviewed to insure that they are used in the most effective and economical manner in carrying out the agency's travel responsibilities. During 1965, 23 old vehicles were traded and 29 new units acquired.

The bureau director and his staff continue to give assistance to the overall planning of the health department activities, particularly in the area of coordinating financial plans.

### PURCHASING AND PROPERTY SECTION

The purchasing section is responsible for the procurement of the agency's supplies, equipment and services. Purchases are made in accordance with rules and regulations issued by the State Purchasing Commission covering the solicitation of bids, advertising for bids under certain conditions, printing regulations, et cetera. Requests for equipment and supplies are reviewed by the purchasing department and purchases are made under contracts and maximum price regulations negotiated by the State Purchasing Commission where applicable. The purchasing department continues to cooperate with other state agencies in the exchange of information pertaining to contracts for volume purchases which enable this agency to purchase certain items under contracts negotiated by other state agencies and to arrange for purchases under our contracts by others. The property division of this section carries out the responsibility of recording, marking and inventorying of all property owned by this agency (desks, chairs, office equipment, and scientific equipment). The state statutes prescribe records that must be maintained and the frequency of physical inventories.

During 1965 the purchasing office issued 4312 separate purchase orders which totaled in excess of $1,400,000. CHDs normally handle purchases locally within their organizational framework; however, their purchasing procedures must also conform to the Florida Statutes governing purchases, such as obtaining bids and advertising for bids where required. The following of good business practices in procuring materials through competitive bids is advocated. The purchasing agent at the SBH assists the CHD wherever possible with their purchasing requirement.

#### Property Control

The responsibility of this section is to see that capital outlay items are assigned property numbers, maintain records, process annual inventories on over 170 locations and handle fire insurance on buildings and contents.

A total of 650 new pieces of equipment valued at $131,485 was added to the inventory. Four small buildings were completed valued at $19,000.

Property values reflected by the SBH Plant Ledger as of June 30, 1965, were as follows:

| | |
|---|---|
| Real property | $2,856,042 |
| Furniture and equipment | 1,385,546 |
| Automotive equipment and trailers | 291,684 |
| Books and films | 343,784 |
| Total | $4,877,056 |

Control of property and maintenance of records as required by Florida Statutes continues to be a job of considerable magnitude, not only because of the dollar increase, but as the SBH continues to grow and departments acquire new quarters, property cards have to be changed or corrected for insurance purposes on any change of location.

The importance of correct maintenance and control of property is continually stressed within the agency to insure that the records reflect the current status of all property items owned by this agency.

### Insurance

Fire insurance on buildings and contents is carried in the State Fire Insurance Fund under the supervision of the State Fire Insurance Commission. Coverage on boilers and heating equipment is carried in a master policy supervised in the office of the State Fire Insurance Commissioner. Scientific equipment, dental equipment and X-ray equipment in various mobile units is insured under a "Floater" or "Transportation" policy. Automobiles, trucks and other special-purpose motor vehicles owned by this agency are covered by a fleet policy to include public liability, property damage, fire, theft and comprehensive. The agency acts as self-insurors for collision damage. Boats and outboard motors owned by the agency are insured under marine policies to include public liability and property damage as well as protection against damage or loss of the boats and motors. Other major insurance coverages include: money and securities, broad form, loss inside and outside of premises; position schedule bond for narcotic inspectors; public employees honesty blanket position; Workmen's Compensation.

During 1965 we were notified by the insurance companies that claims amounting to $16,843.30 were settled under the agency's fleet automobile liability policies. This includes claims for accidents during 1964 and 1965 which were settled during 1965, and includes accidents involving vehicles on loan from the Federal Government for use in the *Aedes aegypti* Eradication Program, as well as SBH vehicles. Damages to SBH vehicles caused by others were settled for $2,044.17. Claims amounting to $2,730.27 for damages to SBH and Federal vehicles under the Comprehensive clause were paid by the insurance company. The SBH as self-insuror for damages caused by collision paid $1,469.38 for repairs. This figure is less than the cost of carrying collision coverage in the fleet automobile policy.

## BUILDINGS AND FACILITIES SECTION

*Maintenance* — During the year 762 work requests were received of which 712 were completed. Forty of the uncompleted requests are active and in process of completion; the remaining 10 have been cancelled or are being held in abeyance. In consummating this work, $15,220.40 was expended in labor and materials; an additional $1,525.50 was expended in labor and material to provide preventive maintenance and to honor verbal requests for assistance.

Some of the major accomplishments of the year were: almost complete waterproofing and caulking of the exterior of the buildings along with recovering a large portion of the painted surfaces. About one-half of the interiors have been refinished in a standardized color; the media and wash rooms have been completely modernized with shelving, sinks and specialty area setups. Many additional electrical branch circuits were established for both the laboratories and Vital Statistics, plus the updating of 39 ceiling light fixtures. In addition, all fluorescent lighting fixture tubes were replaced during the year. The preventive maintenance program is not in full effect because of limited staff. Since the position of boiler operator-repairman was filled in mid-December, boiler outage complaints have been nil.

*Shipping and Receiving* — Lack of operating and storage space handicap this section severely. Business transactions continue to increase at an accelerated pace over that of previous years. The following figures illustrate some of the work performed in this section: 300 orders filled for regional laboratories, 3500 for private physicians, 2500 for CHDs and 300 for tuberculosis hospitals. Fifteen hundred milk and water boxes were repacked with empty cartons and return shipped; 6500 items were picked up within the agency, wrapped and mailed; more than 400 vehicle trips were made to local bus stations for pickup and delivery service; 5000 drug and 4115 form requests were received and filled, and 3600 railway, truck and express waybills were executed during the year.

*Mailing* — This office is also severely handicapped by lack of space and reserve manpower. The following quantities of mail were handled during the year: 1,078,456 pieces of outgoing and 489,340 pieces of incoming mail as well as 182,500 pieces of interoffice mail. The annual postage meter expenditure was approximately $70,000.

*Ditto Room* — The output of this activity is also indicative of the large population increase within the state. In general, the output in this section has been increased because of the necessity of zip coding, plus a purge of the addressee lists conducted during the year. Part-time training of a reserve operator is being conducted. A modern Xerox dry copy machine was installed during the year. The number of plates embossed on the graphotype machine was 12,870; total addressograph impressions were 642,058 and the total number of *Health Notes* addressed and mailed was 177,319.

*Duplicating* — The three, 14 year old offset machines, continue to bear the brunt of the shop work. This department continues to perform the duty of stocking the bulk paper stationery. The output during the past year consisted of: 2117 job requisitions for a total charge of $38,635.89. The total machine impressions were 8,980,426. The decrease in output reflects the influence created by greater use of contractual printing firms for manuscripts, and other printing.

*Security* — The work of the Security Force continues at about the level reported in 1964 with a slight increase in the number of court cases requiring testimony of a security officer.

### FISCAL SECTION

The essential function of this section is the determination of the legality and propriety of payments under the various programs of the agency, processing all bills and vouchers for payment, the financial record keeping and preparation of required financial reports.

The financial transactions of the SBH for the fiscal year ended June 30, 1965, as reflected by the records of the bureau, are presented in a condensed form at the end of this section. A detailed financial report for the fiscal year ended June 30, 1965, has been prepared and distributed to the Governor, members of the Board of Health and all bureaus, divisions and CHDs.

The funds received (or appropriated) for the fiscal year ended June 30, 1965, were from the following sources:

| | | |
|---|---|---|
| State appropriations | $ 9,367,955.00 | 28.6% |
| From local agencies for county health units | 8,310,506.30 | 25.4% |
| From federal grants-in-aid | 3,619,046.91 | 11.1% |
| From research grants | 2,308,306.80 | 7.1% |
| From local and state agencies — hospital services for the indigent | 8,627,265.62 | 26.2% |
| From state and federal for building | 515,693.81 | 1.6% |
| | $32,748,774.44 | 100.0% |

The expenditures by the SBH, in summary, were for:

| | | |
|---|---|---|
| Personal services (salaries and other personal services) | $15,337,358.91 | 47.1% |
| Contractual services (repairs, utilities, travel expense, hospitalization) | 13,113,058.85 | 40.2% |
| Commodities (office, medical, laboratory, and mosquito control supplies) | 1,422,293.35 | 4.4% |
| Current charges (rent, insurance, registrar fees) | 544,253.92 | 1.7% |
| Capital outlay (equipment and fixed assets) | 603,308.78 | 1.8% |
| Grants to counties and mosquito districts | 1,425,612.46 | 4.4% |
| Miscellaneous (education aids and subsidies) | 144,409.16 | .4% |
| | $32,590,295.43 | 100.0% |

In addition to funds reported in the annual financial report and summarized above, certain other funds and services were made available by the USPHS to the activities of the Board but were not paid directly to the SBH. They include USPHS personnel on loan to the Board in the Bureaus of Preventable Diseases and Special Health Services.

Fiscal operation followed a budget plan of 189 departmental budgets. These budgets were periodically revised as required.

## SUMMARY OF RECEIPTS AND DISBURSEMENTS AND BALANCES FOR THE FISCAL YEAR ENDED JUNE 30, 1965

FROM STATE APPROPRIATIONS

General Public Health:

| | |
|---|---|
| Salaries | $ 2,971,560.00 |
| Other personal services | 10,250.00 |
| Expenses | 1,158,820.00 |
| Operating capital outlay | 59,410.00 |
| Grants to localities | 1,650,000.00 |
| Encephalitis research and control | 100,000.00 |
| Purchase of polio and combined vaccines | 125,000.00 |
| Dental scholarships | 40,000.00 |
| Medical scholarships | 40,000.00 |

| | |
|---|---|
| Air pollution control | 81,060.00 |
| Mental health council | 149,360.00 |
| Hospital services for the indigent | 918,900.00 |
| Deficiency fund | 28,595.00 |
| County health units | 2,035,000.00 |
| Total state appropriations | $ 9,367,955.00 |

## FROM FEDERAL GRANTS-IN-AID

| | |
|---|---|
| **Public Health Service:** | |
| General health | $ 305,954.00 |
| Chronic illness and care of aged | 398,035.40 |
| Venereal disease | 166,964.53 |
| Tuberculosis control | 69,957.00 |
| Heart disease | 184,063.00 |
| Cancer control | 94,720.00 |
| Mental health | 177,423.00 |
| Water pollution | 121,698.00 |
| Radiological health | 57,740.00 |
| Mental health planning | 99,702.26 |
| Cuban health services | 726,027.30 |
| Dental health | 10,000.00 |
| **Children's Bureau:** | |
| Maternal and child health | 1,206,762.42 |
| Total federal grants-in-aid | $ 3,619,046.91 |

| | |
|---|---|
| FROM GRANTS AND DONATIONS | $ 2,308,306.80 |
| FROM LOCAL AGENCIES FOR COUNTY HEALTH UNITS | $ 8,310,506.30 |

## FROM HOSPITAL SERVICES FOR INDIGENT

| | |
|---|---|
| Local sources | $ 338,570.11 |
| State welfare board | 8,288,695.51 |
| Total hospital services for indigent | $ 8,627,265.62 |

| | |
|---|---|
| FROM STATE AND FEDERAL FOR BUILDINGS | $ 515,693.81 |
| TOTAL RECEIPTS | $32,748,774.44 |

| | |
|---|---|
| Balance July 1, 1964, $4,993,356.58 (Less expired appropriation of $2,141.14) | $ 4,991,215.44 |
| Total receipts and balances | $37,739,989.88 |

## DISBURSEMENTS

### OPERATING EXPENSES

| | |
|---|---|
| **Personal services:** | |
| Salaries | $14,623,976.03 |
| Other personal services—individual | 548,114.42 |
| Other personal services—other | 165,268.46 |
| **Contractual services:** | |
| Travel expenses, including subsistence and lodging | 1,505,190.97 |
| Communication and transportation of things | 448,022.19 |
| Utilities | 164,396.05 |
| Repairs and maintenance | 145,760.57 |
| General printing and reproduction services | 104,817.48 |
| Subsistence and support of persons | 10,535,148.80 |
| Other contractual services | 209,722.79 |
| **Commodities:** | |
| Bedding, clothing and other textile products | 3,612.36 |
| Building and construction material and supplies | 9,689.00 |
| Coal, fuel oil and other heating supplies | 8,724.31 |
| Educational, medical, scientific and mosquito control supplies and materials | 1,029,967.56 |
| Maintenance materials and supplies | 102,976.46 |
| Motor fuel and lubricants | 57,203.49 |
| Office materials and supplies | 202,578.21 |
| Other material and supplies | 7,541.96 |
| **Current charges:** | |
| Insurance and surety bonds | 73,930.68 |
| Rental of buildings | 158,553.43 |
| Rental of equipment | 101,042.32 |
| Other current charges and obligations | 185,612.37 |
| Merit System | 25,115.12 |
| Total operating expenses | $30,416,965.03 |

## CAPITAL EXPENSES

| | |
|---|---|
| Books | $ 10,414.95 |
| Buildings and fixed equipment | 246,207.30 |
| Educational, medical, scientific and mosquito control equipment | 152,772.31 |
| Motor vehicles—passenger | 64,739.99 |
| Motor vehicles—other | 1,037.80 |
| Office furniture and equipment | 126,008.52 |
| Other capital outlay | 2,127.91 |
| Total capital expense | $ 603,308.78 |

## GRANTS, SUBSIDIES AND CONTRIBUTIONS

| | |
|---|---|
| Grants to counties and mosquito control districts | $ 1,425,612.46 |
| Other educational aids and subsidies | 144,409.16 |
| Total grants, subsidies and contributions | $ 1,570,021.62 |
| Total program expenses | $32,590,295.43 |

## NON-OPERATING DISBURSEMENTS

| | |
|---|---|
| Transfers | $ 526,704.31 |
| Refunds | 80,162.17 |
| Total non-operating disbursements | $ 606,866.48 |
| Total disbursements | $33,197,161.91 |
| Balance June 30, 1965 | $ 4,542,827.97 |
| Total disbursements and balances | $37,739,989.88 |

## SCHEDULE OF EXPENSES BY PUBLIC HEALTH PROGRAM ACTIVITY

| | |
|---|---|
| Health services to mothers, infants, preschool and school children | $ 4,469,000.00 |
| Statewide venereal disease control, diagnosis and referral of infections venereal disease patients to treatment clinics—also operation of program | 1,228,500.00 |
| Mosquito and pest control programs, including pest control law enforcement | 4,551,569.50 |
| Indigent hospitalization | 9,900,170.02 |
| Statewide sanitary engineering and environment sanitation | 2,596,923.17 |
| Statewide cancer control program | 656,000.00 |
| Statewide tuberculosis control, X-ray survey and follow-up work | 1,228,000.00 |
| Mental health program | 1,462,600.00 |
| Statewide narcotic drug, medical practice law enforcement. | 229,426.99 |
| Chronic illness and care of the aged | 1,594,600.00 |
| Heart disease program | 492,200.00 |
| Other health programs and administration | 4,181,305.75 |
| Total expenses | $32,590,295.43 |

## SCHEDULE OF EXPENSES BY FUNCTIONAL ACTIVITY

| | |
|---|---|
| General public health (also includes miscellaneous health activities and training) | $ 2,435,801.93 |
| Vital statistics | 407,325.63 |
| Health education | 99,302.84 |
| Sanitary engineering | 667,536.74 |
| Entomology and mosquito control | 3,457,162.71 |
| Tuberculosis control | 325,720.74 |
| Laboratories | 934,328.04 |
| Preventable disease (excluding tuberculosis control) | 954,870.25 |
| Mental health | 412,978.72 |
| Narcotics | 182,710.60 |
| Maternal and child health | 631,946.84 |
| Hospital Service for the indigent | 9,900,170.02 |
| Local health service | 476,299.31 |
| Chronic diseases | 528,393.87 |
| County health units | 10,944,067.96 |
| Building construction | 231,679.23 |
| Total expenses | $32,590,295.43 |

## TABLE 10

### FUNDS RECEIVED BY COUNTY HEALTH UNITS FROM STATE BOARD OF HEALTH AND LOCAL SOURCES FOR THE FISCAL YEAR ENDED JUNE 30, 1965

| COUNTY | Total Funds | STATE BOARD OF HEALTH | | | LOCAL FUNDS | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Total | State | Federal | Total | Board of County Commis- sioners | Board of Public Instruction | Cities | Fees and Miscella- neous |
| Alachua | $ 237,759 | $ 82,234 | $ 70,278 | $ 11,956 | $ 155,525 | $ 118,227 | $ 6,000 | $ 22,220 | $ 9,078 |
| Baker | 22,560 | 9,573 | 9,573 | | 12,987 | 12,625 | | | 362 |
| Bay | 102,319 | 49,316 | 46,135 | 3,181 | 53,003 | 50,383 | | | 2,620 |
| Bradford | 36,101 | 15,417 | 15,417 | | 20,684 | 15,374 | 2,800 | 2,400 | 110 |
| Brevard | 278,854 | 78,028 | 73,548 | 4,480 | 200,826 | 188,212 | | | 12,614 |
| Broward | 566,018 | 137,979 | 133,899 | 4,080 | 428,039 | 420,712 | | 2,740 | 4,587 |
| Calhoun | 23,766 | 10,958 | 10,958 | | 12,808 | 11,000 | 600 | | 1,208 |
| Charlotte | 71,586 | 21,185 | 21,185 | | 50,401 | 43,811 | 1,000 | | 5,590 |
| Citrus | 34,495 | 20,629 | 20,629 | | 13,866 | 9,961 | 3,600 | | 305 |
| Clay | 51,995 | 21,492 | 21,492 | | 30,503 | 27,973 | | 2,400 | 130 |
| Collier | 85,586 | 35,112 | 35,112 | | 50,474 | 44,082 | | | 6,392 |
| Columbia | 52,049 | 23,746 | 23,746 | | 28,303 | 26,786 | | | 1,517 |
| Dade | 1,992,526 | 354,436 | 182,572 | 171,864 | 1,638,090 | 1,510,375 | | | 127,715 |
| DeSoto | 41,303 | 22,933 | 22,933 | | 18,370 | 16,980 | | | 1,390 |
| Dixie | 19,431 | 7,151 | 7,151 | | 12,280 | 9,670 | 2,600 | | 10 |
| Duval | 336,397 | 156,577 | 102,361 | 54,216 | 179,820 | 134,470 | | 3,960 | 41,390 |
| Escambia | 332,430 | 103,210 | 85,880 | 17,330 | 229,220 | 162,202 | | 25,000 | 42,018 |
| Flagler | 20,766 | 8,836 | 8,836 | | 11,930 | 11,747 | | | 183 |
| Franklin | 26,985 | 9,853 | 9,853 | | 17,132 | 17,068 | | | 64 |
| Gadsden | 78,498 | 38,872 | 38,872 | | 39,626 | 34,226 | 3,930 | 1,000 | 470 |
| Gilchrist | 14,831 | 5,795 | 5,795 | | 9,036 | 4,620 | 4,300 | | 116 |
| Glades | 16,770 | 4,188 | 4,188 | | 12,582 | 12,491 | | | 91 |
| Gulf | 40,155 | 14,263 | 14,263 | | 25,892 | 22,714 | 3,000 | | 178 |
| Hamilton | 24,849 | 11,008 | 11,008 | | 13,841 | 12,167 | | 1,365 | 309 |
| Hardee | 46,907 | 15,815 | 15,815 | | 31,092 | 28,934 | 500 | | 1,658 |
| Hendry | 51,375 | 13,715 | 13,715 | | 37,660 | 19,173 | | | 18,487 |
| Hernando | 26,228 | 11,549 | 11,549 | | 14,679 | 7,156 | 7,000 | | 523 |
| Highlands | 63,477 | 33,180 | 33,180 | | 30,297 | 29,314 | | | 983 |
| Hillsborough | 1,141,362 | 176,071 | 81,201 | 94,870 | 965,291 | 756,134 | | | 209,157 |
| Holmes | 29,894 | 14,839 | 14,839 | | 15,055 | 7,500 | 7,500 | | 55 |
| Indian River | 62,306 | 29,696 | 29,696 | | 32,610 | 20,462 | 3,000 | 4,500 | 4,648 |
| Jackson | 84,526 | 47,689 | 38,989 | 8,700 | 36,837 | 32,079 | 3,000 | 600 | 1,158 |
| Jefferson | 27,522 | 13,401 | 13,401 | | 14,121 | 7,000 | 6,000 | 1,000 | 121 |
| Lafayette | 15,063 | 5,057 | 5,057 | | 10,006 | 10,000 | | | 6 |
| Lake | 102,685 | 36,739 | 36,739 | | 65,946 | 63,811 | | 1,625 | 510 |

## TABLE 10 (Continued)

### FUNDS RECEIVED BY COUNTY HEALTH UNITS FROM STATE BOARD OF HEALTH AND LOCAL SOURCES FOR THE FISCAL YEAR ENDED JUNE 30, 1965

| COUNTY | Total Funds | STATE BOARD OF HEALTH | | | LOCAL FUNDS | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Total | State | Federal | Total | Board of County Commis- sioners | Board of Public Instruction | Cities | Fees and Miscella- neous |
| Lee | $ 115,085 | $ 40,500 | $ 40,500 | $ | $ 74,585 | $ 74,063 | $ | $ | $ 522 |
| Leon | 249,517 | 84,263 | 71,390 | 12,873 | 165,254 | 109,344 | 11,393 | 5,000 | 39,517 |
| Levy | 33,022 | 14,448 | 14,448 | | 18,574 | 11,313 | 5,700 | | 1,561 |
| Liberty | 16,272 | 6,926 | 6,926 | | 9,346 | 9,330 | | | 16 |
| Madison | 34,495 | 17,306 | 17,306 | | 17,189 | 17,101 | | | 88 |
| Manatee | 178,024 | 56,297 | 56,297 | | 121,727 | 103,085 | | | 18,642 |
| Marion | 103,321 | 44,905 | 44,905 | | 58,416 | 46,652 | 4,000 | 5,600 | 2,164 |
| Martin | 44,056 | 23,609 | 23,609 | | 20,447 | 18,439 | 750 | | 1,258 |
| Monroe | 113,390 | 47,171 | 41,891 | 5,280 | 66,219 | 47,862 | 7,333 | 4,000 | 7,024 |
| Nassau | 68,997 | 22,510 | 22,510 | | 46,487 | 46,090 | | | 397 |
| Okaloosa | 109,678 | 32,320 | 32,320 | | 77,358 | 53,106 | 12,000 | | 12,252 |
| Okeechobee | 24,716 | 10,194 | 10,194 | | 14,522 | 14,199 | | | 323 |
| Orange | 520,773 | 143,957 | 115,007 | 28,950 | 376,816 | 269,429 | 20,167 | 4,220 | 83,000 |
| Osceola | 41,312 | 21,833 | 21,833 | | 19,479 | 16,650 | 2,200 | | 629 |
| Palm Beach | 768,869 | 137,188 | 110,512 | 26,676 | 631,681 | 509,687 | 29,415 | | 92,579 |
| Pasco | 45,797 | 21,316 | 21,316 | | 24,481 | 21,606 | | | 2,875 |
| Pinellas | 1,124,073 | 185,474 | 109,144 | 76,330 | 938,599 | 749,232 | | | 189,367 |
| Polk | 468,744 | 111,811 | 86,397 | 25,414 | 356,933 | 280,538 | 43,340 | 4,800 | 28,255 |
| Putnam | 83,864 | 37,788 | 37,788 | | 46,076 | 42,826 | | | 3,250 |
| Santa Rosa | 60,296 | 26,345 | 26,345 | | 33,951 | 27,738 | | | 6,213 |
| Sarasota | 245,958 | 65,433 | 62,013 | 3,420 | 180,525 | 151,107 | | | 29,418 |
| Seminole | 96,923 | 40,195 | 40,195 | | 56,728 | 38,810 | 13,749 | | 4,169 |
| St. Johns | 54,883 | 28,585 | 28,585 | | 26,298 | 24,151 | 1,920 | | 227 |
| St. Lucie | 118,051 | 47,074 | 47,074 | | 70,977 | 43,528 | | 10,000 | 17,449 |
| Sumter | 31,653 | 16,647 | 16,647 | | 15,006 | 14,322 | | | 684 |
| Suwannee | 36,630 | 20,520 | 20,520 | | 16,110 | 15,947 | | | 163 |
| Taylor | 29,441 | 16,070 | 16,070 | | 13,371 | 12,750 | 500 | | 121 |
| Union | 18,719 | 8,376 | 8,376 | | 10,343 | 10,319 | | | 24 |
| Volusia | 341,812 | 115,326 | 107,766 | 7,560 | 226,486 | 163,652 | 12,900 | | 49,934 |
| Wakulla | 27,543 | 13,536 | 13,536 | | 14,007 | 14,000 | | | 7 |
| Walton | 47,204 | 20,073 | 20,073 | | 27,131 | 17,616 | 7,000 | 2,400 | 115 |
| Washington | 31,627 | 15,076 | 15,076 | | 16,551 | 16,485 | | | 66 |
| County Health Units, State at Large | 69,680 | 69,680 | 69,680 | | | | | | |
| Totals | $11,513,799 | $ 3,203,294 | $ 2,646,114 | $ 557,180 | $ 8,310,505 | $ 6,890,416 | $ 227,197 | $ 104,830 | $ 1,088,062 |

## BUREAU OF LABORATORIES

NATHAN J. SCHNEIDER, Ph.D., M.P.H.,
Director

WARREN R. HOFFERT, Ph.D., M.P.H.,
Assistant Director

Laboratory services were provided to the county health departments (CHD) and to other bureaus and divisions of the State Board of Health (SBH) in support of their broad and varied public health programs. Similarly, diagnostic and epidemiologic assistance was provided to licensed practitioners of the healing arts. The bureau discharged its responsibilities in approving qualified private and hospital laboratories for performing serological tests for syphilis on prenatal and premarital patients; it assisted the Bureau of Narcotics in regulating the sale of narcotics, drugs, cosmetics and devices in Florida.

The new $240,000 facility for the Pensacola Regional Laboratory was completed and occupied in June, and formally dedicated on August 15, 1965, as the Herbert L. Bryans Building in memory of the late eminent Pensacola physician and member of the Florida State Board of Health for over 18 years. Availability of this modern laboratory enables the redirection of certain procedures such as tuberculosis bacteriology for the West Florida area, thus speeding up laboratory findings.

Construction of the new Tampa Regional Laboratory building was initiated in July, after the 1965 State Legislature had appropriated $75,000 to supplement the $300,000 appropriation of the previous legislature. The total cost of constructing and equipping this facility will amount to $750,000. Anticipated completion date is May 1966.

Elsewhere, approximately 1500 square feet of space was allocated to the Miami Regional Laboratory to permit expansion of the chemistry section for pesticide research studies. This was needed to provide laboratory support for the Community Studies on Pesticides in Dade County. With contract funds from the U. S. Public Health Service (USPHS), a modern pesticide laboratory was established in the Dade County Annex building. This section shares quarters with the Dade County Air Pollution Laboratory, thus complementing the activities of that unit. It must be noted, however, that despite additional space, the Miami Regional Laboratory remains crowded because of expansion of public health activities to meet demands of highly urbanized south Florida. There is an urgent need for a larger and more adequately equipped facility in Dade County to replace the present Miami Regional Laboratory building.

Sadly, the year under review saw the passing of Mr. Homer D. Venters, director of the Tampa Regional Laboratory. Mr. Venters observed the 50th anniversary of his employment with the State Board of Health on November 1, in apparent good health. The following day, a fulminating pneumococcal infection, which was incubating insidiously even as he was receiving good wishes and plaudits from his friends and coworkers, struck him down. He did not live to see the fruition of his heart's desire, viz., completion of the new Tampa Regional Laboratory facility. Nevertheless, his was the good fortune of realizing part of an ambition in planning this facility, as well as knowing that the new building will memorialize his name. A diamond pin, signifying 50 years of meritorious service was presented posthumously to his widow on November 18, 1965.

### DIAGNOSTIC SERVICES

The nature and extent of diagnostic laboratory services offered during 1965 are presented in Table 11. A total of 2,637,279 examinations was performed in 1965 as compared to 2,809,275 for the preceding year. This decrease in number of examinations does not reflect a lessening in workload because 39,370 more specimens were submitted in 1965. What seemed an apparent discrepancy, i.e. more specimens yet fewer examinations, is due to the fact that certain procedures in syphilis serology were streamlined. In contrast, increased specimens in bacteriology and virology resulted in a greater workload because of the added complexity of more sensitive technics. Major increases were noted in the number of examinations of throat swabs for diphtheria and streptococcal infections, sputum specimens for tuberculosis, cervical and urethral smears for gonococci, fecal specimens for enteric pathogens, foods for sanitary quality, chemistry specimens for blood sugar, toxicology, narcotics, radioactivity and pesticides, and tissues for viral agents.

In sanitary bacteriology, the decrease in the number of dairy products submitted for examination was due primarily to a reduction in the number of replicate samples from CHDs. Since Florida milksheds cut across county lines, every effort has been made to encourage the sharing of laboratory information as to the quality of milk distributed to multiple counties. These efforts have resulted in reducing the number of finished milk samples considered adequate to maintain surveillance of milk reaching the consumer. There was a high level of surveillance of raw milk, both Florida produced and out-of-state shipped milk. This was evidenced by an increase in the number of raw milk samples tested in 1965.

There was a moderate increase in the number of examinations of drinking water and that from swimming pools, 209,906 in 1965 as compared to 193,400 in 1964. A total of 13 CHDs has been approved for testing private water supplies by the membrane filter (MF) technic; six of these, viz. St. Lucie, Manatee, Charlotte, Sarasota, Pinellas and Alachua, have also been approved for testing public waters and swimming pools. Thus the number of potable samples submitted to the bureau represented only a portion of the total examined by public health authorities in Florida. The number of pollution water examinations continued at virtually the same level in 1965 with 70,985 tests performed as compared to 71,070 in 1964. Tampa, Miami and Orlando laboratories experienced moderate increases in pollution waters tests. It is anticipated that there will be more demands for bacteriological and chemical examinations of streams, lakes and water areas used for recreational and industrial purposes.

The productivity of the radiological chemistry section reached its full potential during 1965. This section, housed in the Orlando Regional Laboratory building, served statewide needs. Selected specimens were tested for content of radionuclides as evidence of radiation in the environment. These studies were part of a radiological surveillance program carried out by the Division of Radiological and Occupational Health and by the Bureau of Sanitary Engineering. There was a 6.5-fold increase in output over the preceding year. Continued productivity at the 1965 level will depend on availability of research funds which have provided salaries for personnel. Because state and federal public health agencies must be prepared for the eventuality of increased industrial and military use of radioactive materials, the capability of the radiological laboratory must be maintained regardless of the present low levels of radiation in the environment. The technical capability of the laboratory was assured by interchanging quality control specimens with the USPHS Radiological Laboratories.

The results of examinations in SBH laboratories are presented in Table 12. A total of 737,830 specimens was examined for syphilis and 32,052 were reactive. Excluding specimens unsatisfactory for testing, the per cent reactive was 4.4, the same as in 1964, but 6.1 in 1962 and 4.9 in 1960. Continued attention was given to blood specimens from problem cases of suspected syphilis and/or biologic false positives. Specimens from 115 problem patients whose clinical status had been determined were subjected to the VDRL, Fluorescent Treponemal Antibody (FTA-ABS) and Treponemal Pallidum Immobilization (TPI) tests. Comparison of the relative sensitivity and specificity of each test procedure as presented in Table 13 tend to confirm the experience of others. A total of 182 sera was submitted to the USPHS laboratories in Atlanta for TPI testing from the bureau during 1965.

The number of diagnostic specimens found positive for diphtheria in 1965 was 64 or 0.9 per cent (Table 12). This continues a downward trend: in 1960, 4.5 per cent; in 1962, 2.6 per cent; and in 1964, 1.0 per cent. The decline in positives emphasizes the difficulty in completely eradicating diphtheria and/or other similar diseases. The proportion of throat specimens positive for streptococcal infections remained about the same as the preceding year, 17.5 per cent. There was a marked increase in the number of throat specimens positive for other potentially pathogenic organisms, particularly staphylococci, pneumococci and *H. influenzae*. In 1965, 62 per cent yielded such isolations, as compared to only 25 per cent in 1964. The reason for this high rate is not apparent. When found in healthy individuals, such organisms are considered normal flora. Many of the throat swabs examined are from sick persons and reports of findings are sent to the physician for interpretation of clinical significance.

A total of 53,408 sputum and associated specimens was submitted to the laboratory for tuberculosis and other mycobacterial cultures. Compared with 46,498 specimens submitted in 1964, this represented an increase of 15 per cent; due in part to a stepped-up casefinding and surveillance program by CHDs and the Division of Tuberculosis Control. Excluding unsatisfactory specimens, there was a total of 5051 or 9.9 per cent cultures positive for *M. tuberculosis* or atypical mycobacteria, as compared to 7.4 per cent in 1964 and 5.9 per cent positives in 1963. It is believed that a modification in the digestion procedure reported in the 1964 annual report accounts for the increased sensitivity of the cultural procedure.

Smear specimens examined for the presence of gonococci (GC) and associated infections increased from 43,617 in 1964 to 48,058 in 1965. In contrast, there was a decrease in the number of GC cultures of fluorescent antibody tests from 21,113 specimens in 1964 to 19,345 in 1965. The per cent positive for GC by smear was 16.1 and by culture 8.0. The reliability of the smear test is questionable, particularly when examining urethral or cervical specimens from females; however, because of the relative ease with which this type of specimen is taken and mailed to the laboratory, many physicians continue to depend upon it for diagnosis because the culture test can only be provided to clinics located in close proximity to the laboratory.

The number of fecal specimens cultured for enteric pathogens increased from 54,108 in 1964 to 57,758 in 1965. There were 84 positives for *S. typhosa*, a decrease from 111 in 1964, and 1330 *Salmonellae* and 261 *Shigellae* were isolated in 1965 as compared to 1067 and 218, respectively, for 1964. This increase may be due to a greater awareness on the part of physicians. A total of 190 other enteric pathogens were cultured in 1965 as compared to only 83 in 1964. These "other" pathogens included six different enteropathogenic serotypes of *E. coli* as well as members from the Arizona and Edwardsella groups.

A total of 628 blood specimens was examined serologically for leptospiral agglutinins; 18 or 2.87 per cent were positive. In addition to specimens from suspect cases, paired sera from patients with aseptic meningitis of suspected viral etiology, were tested for a rise in agglutination titer.

Among the miscellaneous examinations, there was a total of 84 darkfield specimens positive for *T. pallidum* as found in the Dade County Department of Public Health V.D. Clinic. Results of darkfield examinations performed in other CHD clinics were not reported to this bureau. The finding of motile spirochaetes characteristic of *T. pallidum* in lesions is diagnostic evidence of syphilis.

A total of 2670 miscellaneous bacteriological cultures were submitted to the laboratory for identification and characterization. This service is beneficial to smaller laboratories which, because of limited facilities or lack of specialized reagents, seek assistance in identifying bacterial isolates.

There were numerous special bacteriological services offered by the bureau, including bacteriological plate counts on urine specimens, sterility testing on drugs and biologicals, staphylococcal cultures from hospital acquired infections and culturing of imported novelties (water filled ice balls and stuffed baby chicks) for bacterial pathogens.

A moderate increase in the number of saliva specimens submitted for lactobacillus plate counts was noted. Dentists have used this service in close consultation with the Bureau of Dental Health which provided professional interpretation of findings on all specimens reported.

The number of stool specimens examined for intestinal parasites decreased moderately during the year. Positive findings for hookworm, ascaris, enterobius (pinworm) and trichuria decreased. Table 14 summarizes the trend in findings for two parasitic diseases during the past 15 years. From 1950 to 1965, the overall proportion of specimens positive for hookworm declined from 18.8 per cent to 4.1 per cent. Most of the decline occurred in West Florida and the peninsular areas of the state north of West Palm Beach. For some unexplained reason, the area served by the West Palm Beach (WPB) laboratory showed a moderate decline from 1955 to 1965 (data for 1950 was unavailable). The observations on ascariasis differs significantly. In 1950, there were 3.3 per cent positives statewide and after 15 years, this high level of positivity remains at 3.6 per cent.

In the chemistry section, 36,808 blood specimens were examined for various determinations including blood sugar, cholesterol, hemoglobin, cholinesterase inhibition, phenylalanine, barbiturates, amphetamines and alcohol. Urine specimens were examined in the Miami Regional Laboratory for P-nitrophenol, a metabolite of parathion poisoning, as part of the Community Pesticide studies being carried out in Dade County. There was a marked increase in the number of toxicological and narcotics specimens examined in Jacksonville and Miami laboratories. These specimens represent a large amount of time since the chemists involved must appear in court to testify as expert witnesses. There were quite a number of such specimens from the Tampa area making it highly important to establish a chemistry section in the new Tampa Regional Laboratory building now under construction.

The radiological chemistry laboratory carried out analyses of ground and rain water, air, milk, shellfish, selected tissues and environmental specimens for radionuclides. There was a marked increase in the number of specimens examined. Utilization of automatic data processing speeded up the needed calculations making it possible to report final results with a minimum time lag. The responsibilities assigned to this section were related to the radiological surveillance program of the Division of Radiological and Occupational Health presented elsewhere in this report. A USPHS research project concerned with a study of the ratio of Cesium-137 and Strontium-90 in milk was included in the workload of the laboratory.

Diagnostic services for viral and rickettsial diseases were provided on a statewide basis from the Jacksonville laboratory. However, such services were coordinated with studies carried out in the Tampa Bay area by the Encephalitis Research Center, (See Bureau of Research elsewhere in this report) and in the Dade County area by the Department of Medicine, University of Miami School of Medicine. The diagnostic laboratory in Jacksonville accepted such specimens as were found negative for arboviral agents by both research laboratories and tested them for other viral agents associated with central nervous system (CNS) disease. These tests included animal inoculations and various serological examinations such as hemagglutination-inhibition, neutralization and complement-fixation tests. Close liaison was maintained between the several laboratories to minimize duplication of diagnostic procedures on suspect encephalitis cases.

Viral and rickettsial findings on 1519 patients examined in 1965 are presented in Table 15. A total of 119 cases, representing 7.8 per cent of the patients studied, yielded positive diagnostic findings of viral etiology and 376 or 21.5 per cent gave equivocal results. This compares favorably with the experience of most public health virology laboratories. The efficacy of providing good virological service is dependent in part on the astuteness of the clinician in correctly suspecting disease of viral etiology in his patient and the submission of adequate specimens collected at the proper stage of disease for the laboratory to examine. Thus, many of the previously mentioned equivocal findings did not lend themselves to interpretation because no tissues were submitted for viral isolation; nor could a rise in antibody titer be demonstrated either because only a single serum was submitted or because paired sera were collected too late in the course of illness. In regard to the positive findings, there was a marked increase in the number of respiratory infections found; 58 cases in 1965 as compared to only two in 1964. In contrast, there was a marked decrease in the number of laboratory confirmed cases of CNS infections; 49 cases in 1965 as compared to 128 the previous year. Most of this decrease was due to fewer cases of mumps and Coxsackie infections. The complement fixation test study for *Mycoplasma pneumoniae* (Eaton agent) was instituted in September and a total of 115 patients was examined serologically; 10 were found to be positive.

The number of animals examined for rabies totalled 3667; two less than the previous year. There were fewer positives in 1965; 79 as compared to 105 in 1964. As in the past, most of the positives were found in wildlife, i.e. raccoons, skunks and bats. There were only four positive dogs and one cat.

The cooperative laboratory diagnostic and special study program established between the SBH and the State Tuberculosis Board completed the tenth successful year. This arrangement has contributed immeasurably to the success of the tuberculosis control program in Florida by providing standardized procedures for the diagnosis and treatment of the disease. The nature and extent of the studies performed in the state hospital laboratories are presented in Table 16. A total of 125,173 laboratory examinations in 1965 as compared to 104,160 in 1964 indicates the trend in tuberculosis control in Florida. There was an increase of 15.2 per cent in the number of diagnostic tuberculosis cultures examined from patients in the hospitals. Improvements in diagnostic and concomitant therapeutic measures have resulted in more cases diagnosed and more patients hospitalized and discharged to return to their homes for final recovery.

## SPECIAL STUDIES

The bureau continued its active program of special studies as listed in Tables 11 and 12, indicative of the wide variety of projects with which it was concerned.

The identification of enteric pathogens belonging to the *Salmonella* group was continued. A total of 1439 cultures was typed during 1965 as compared to 1254 in 1964 and 786 in 1960. It is apparent that there has been an increase in the level of surveillance. According to USPHS data, Florida ranked within the top 10 in incidence of *Salmonella* reported to the National Salmonella Surveillance Network. Greater awareness of the role of *Salmonella* infections in enteric disease and more sensitive enrichment procedures may have accounted for this increase in laboratory confirmation of Salmonellosis. While *Shigellae* are also commonly found in enteric diseases, there is a need to improve bacteriological technics, particularly by providing more adequate means of preserving the viability of *Shigella* during shipment of specimens to the laboratory and a better enrichment procedure more comparable to that used for *Salmonella*.

Special studies on diarrheal diseases were conducted in the Miami Regional Laboratory as part of a research contract between the Division of Gastroenterology, Department of Medicine, University of Miami School of Medicine, and the U. S. Armed Forces Epidemiological Board. Specimens collected from the intestinal tract of normal and sick patients were examined for bacterial and viral flora. This work is in the terminal year of a three year contract.

Statewide surveillance for arthropod-borne viral infections was continued during 1965. These studies, supported by state funds, complemented the surveillance carried out by ERC Laboratory in Tampa. A total of 2085 pools of mosquitoes and selected animal tissues was processed and inoculated into suckling mice; also human and animal blood specimens were examined for hemagglutinating and/or complement-fixing antibodies against antigens prepared from St. Louis Encephalitis, Eastern Encephalitis (EE), Western Encephalitis (WE) and California Encephalitis (CE) viruses. Of two agents identified as EE, one was isolated from horse tissue and one from chukar partridges. From the 119 selected animal tissues, a Bunyamwera Group (Tensaw-like) agent was isolated from the brain of a fox collected in Marion County. There were 59 arboviral agents isolated from 1965 mosquito pools. Among the mosquito isolations, 26 agents were identified as California complex, 18 Bunyamwera Group, 7 Hart Park-Like, 6 EE and 2 WE viruses. In addition, there were 12 agents not yet identified. These isolations do not include agents recovered from collections made by ERC in Tampa. The mosquito collections submitted to the Jacksonville laboratory were collected by the Bureau of Entomology and animal sera by the Division of Veterinary Public Health. Counties yielding arboviral isolates included Duval, Madison, Jefferson, Marion, Gulf, Leon, Polk, Charlotte, Clay, Alachua, Bay, Walton, Franklin and Citrus.

Continuing studies on the sanitary quality of salad type foods, a three year research grant funded by the USPHS, was carried out in cooperation with the Division of Sanitation. Standardized bacteriological procedures were established and baseline data as to the quality of market and processing plant samples were determined. Quantitative tests included enumeration of total and fecal coliforms, coagulase positive staphylococci, anaerobic *Clostridium perfringens* and the aerobic standard plate count. In addition, each specimen was tested for the presence of *Salmonellae*. Simultaneously with the laboratory testings, the Division of Sanitation studied the sanitation factors associated with processing and marketing of salad type foods since the numbers and kinds of bacteria are directly related to proper preparation and storage. Preliminary findings indicated that the general sanitation and quality of salads studied were good but that bacteria present in small numbers could multiply and become pathogenic if such salads were mishandled by lack of refrigeration or improper storage. Acceptability and shelf-life of salads may also be reduced when large numbers of bacteria are allowed to multiply.

The laboratory was in the final year of a three year study supported by the USPHS to determine the usefulness of the Sabin-

Feldman dye test in diagnosing chronic eye diseases by demonstrating for toxoplasmosis antibody. A total of 386 serum specimens was tested. As reported last year, findings seem to indicate that dye test results are difficult to interpret because of the widespread presence of antibodies found in apparently healthy adults. Also, the absence of antibodies or very low titers cannot be regarded as ruling out *Toxoplasma gondii* as the etiologic agent. Because of the relatively poor vascularization inherent in the eye, an exacerbation of the dormant parasite may produce tissue damage but fail to stimulate antibody production. The fluorescent antibody procedure was investigated and found to be unsatisfactory in providing dependable and reproduceable results. Plans were made to investigate the usefulness of a hemagglutination test as an adjunct for diagnosing toxoplasmosis. This part of the study will be carried out in cooperation with the USPHS Communicable Disease Center Laboratory in Atlanta.

Mycobacterium studies were supported in part by a research grant funded by the USPHS. (See Division of Epidemiology report). Aside from the study and characterization of atypical mycobacteria cultures from human infections, soil and other environmental specimens obtained in the vicinity of households of index cases also were cultured. Isolates were studied by several biochemical and bacteriological tests to determine their relationship to human strains. Unfortunately the available tests were not specific enough to provide definitive information as to the exact similarity of human to soil isolates. Further efforts utilizing a newly developed agglutination test need to be studied to determine the usefulness of the test in characterizing mycobacteria.

Last year, it was reported that the Miami Regional Laboratory had established the capability of performing and offering the Guthrie test to screen newborn infants for detection of early cases of phenylketonuria (PKU). Stimulated by legislation passed in 1965 authorizing the SBH to promote testing of all newborns, the number of tests increased from 14,042 in 1964 to 24,923 in 1965. Plans were made to provide this test procedure in the Jacksonville laboratory as well as in Miami. When fully developed, this service will be provided by the Miami laboratory for the southern part of Florida and by the Jacksonville laboratory for the remainder of the state. It is anticipated that testing will be carried out also in most large hospital and private laboratories. The bureau will provide this service to the medically indigent and where the needs are not met by private laboratories. It must be emphasized that regardless of where the screening tests are performed, all laboratories are now required by Florida Statute to report findings of positives and the total babies tested to the Bureau of Maternal and Child Health. More importantly, newly detected patients should have proper therapy as soon as possible in order to minimize brain damage to the developing infant.

Special studies to determine toxin in oysters and airborne pollen were carried out on a small scale during the year. Both studies will be continued as the need and interest remains.

Although not listed separately in the tabular data, each of the regional laboratories and, in turn, each of the sections within the central laboratory performed limited special projects during 1965. These included evaluations of various laboratory procedures and/or bacteriological cultured technics. Jacksonville, Miami, Tallahassee and West Palm Beach laboratories compared several digestion procedures for culturing *M. tuberculosis*. The Tampa laboratory was particularly active in evaluating the Thayer-Martin GC culture medium. The Pensacola laboratory has been occupied with the move into a new facility and the subsequent adaptation of the routine procedures; however, tuberculosis bacteriological culturing was initiated. The Orlando laboratory has been active in developing and evaluating radiological chemistry methodology as well as testing for the sanitary quality of foods.

## CONSULTATIVE AND EDUCATIONAL SERVICES

Assisted by the USPHS, three technological workshops were conducted as follows: (1) Enteric bacteriology — held at the Teaching Hospital, University of Florida, College of Medicine, Gainesville. Five days in length and attended by 20 bacteriologists and/or medical technologists. (2) Syphilis serology — held at the Teaching Hospital, University of Florida, College of Medicine, Gainesville. Three days in length and attended by 13 students from hospital laboratories throughout the state. (3) Clinical chemistry — held at Barry College, Miami. Three days in length and attended by 21 senior medical technologists from hospital and private laboratories.

Technical and consultative guidance were provided to four county health officers, two hospital staff physicians, nine medical technicians and 56 sanitarians and water plant operators in the form of short periods of training in specific laboratory procedures. A total of 14 additional clinical laboratories was approved to perform serological tests for syphilis for premarital and prenatal patients bringing the overall total to 278 as of the close of 1965.

The bureau carried out registration of 59 medical laboratories and assisted the Board of Examiners in the Basic Sciences to license 422 medical technologists and 137 medical technologist directors as provided by Chapter 483 of the Florida Statutes.

Continuing visits and inspections were made to 18 public health and commercial dairy laboratories to certify the performance of bacteriological and related tests in accordance with Standard Methods and the USPHS requirements for interstate shipments of milk. In addition, visitation and certification of water testing facilities in five regional public health laboratories, four CHDs and five municipal water plants were performed.

Evaluation specimens for hemoglobin determinations were sent to 220 public health, hospital and private clinical laboratories. The comparative findings were circulated among participating laboratories and technical assistance was provided when needed.

During the past several years, senior laboratory personnel have given guidance to several outstanding high school students engaged in scientific projects. Since 1962, four of these students have received national recognition for their work in biochemistry and enzymology.

**Revision 1965 of previously published list of laboratories approved for premarital and prenatal serology:**

ADDED

Analytical Laboratories of Florida, 34711 N. Federal Highway, Ft. Lauderdale
L. G. Landrum, M.D., 2300 South First Street, Lake City
Palm Springs Medical Laboratory, 801 West 49th Street, Hialeah
James Archer Smith Hospital, Inc., 1220 N. W. 1st Avenue, Homestead
Gadsden County Hospital, 339 E. Jefferson Street, Quincy
Wauchula General Hospital, 528 N. Main Street, Wauchula
Good Samaritan Osteopathic Hospital, 7171 N. Dale Mabry, Tampa
Walter R. McCook, M.D., 615-B United Street, Key West
Fisherman's Hospital Laboratory, U. S. Highway I, Marathon
Fred F. Crews, M.D., 300 South Avenue, Ft. Walton Beach
Winter Park Memorial Hospital, 200 N. Lakemont Avenue, Winter Park
Lake Alfred Medical Center, P. O. Box 1295, Lake Alfred
QRS Laboratory, 500 North 1st Street, Winter Haven
Medical Arts Laboratory, North Causeway, New Smyrna Beach

REMOVED

Professional Laboratories, Medical Arts Building, Cocoa
1333 Medical Laboratory, 1333 S. Miami Avenue, Miami
Bio-Medical Clinical Laboratory, 815 Flagler Street, W., Miami
Christian Hospital Laboratory, 4700 N. W. 32nd Avenue, Miami

## TABLE 11

## EXAMINATIONS PERFORMED BY FLORIDA STATE BOARD OF HEALTH LABORATORIES, 1965

| Examination | Jacksonville | Tampa | Miami | Pensacola | Tallahassee | Orlando | West Palm Beach | Pinellas County | TOTALS |
|---|---|---|---|---|---|---|---|---|---|
| GRAND TOTALS | 947,735 | 494,871 | 521,389 | 116,006 | 122,512 | 231,659 | 150,107 | 53,000 | 2,637,279 |
| SEROLOGY | | | | | | | | | |
| Syphilis | 252,066 | 232,316 | 280,990 | 45,753 | 32,337 | 71,675 | 61,747 | ..... | 976,884 |
| Agglutination & related tests | 1,558 | 309 | 717 | 74 | 105 | 91 | 16 | ..... | 2,870 |
| Blood typing (Rh) | 4,468 | 4,359 | 3,957 | 1,289 | 945 | 2,136 | 1,083 | ..... | 18,237 |
| DIAGNOSTIC BACTERIOLOGY | | | | | | | | | |
| Diphtheria & associated infections | 32,886 | 1,196 | 4,122 | 200 | ..... | 50 | 696 | ..... | 39,150 |
| Tuberculosis | 152,700 | ..... | 24,796 | ..... | 12,416 | ..... | 14,127 | ..... | 204,039 |
| G.C.—smear | 19,200 | 28,132 | 27,394 | 5,324 | 10,666 | 3,374 | 1,346 | ..... | 95,436 |
| —culture | ..... | 12,500 | 3,269 | 1,293 | 1,912 | ..... | ..... | ..... | 18,974 |
| —fluorescent antibody | 7,250 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 7,250 |
| Enteric | 80,402 | 55,008 | 25,472 | 13,832 | 24,708 | 34,858 | 6,894 | ..... | 241,174 |
| Blood culture | 568 | 8 | 16 | 192 | 48 | 112 | 200 | ..... | 1,144 |
| Leptospirosis | 2,488 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2,488 |
| Miscellaneous | 89,553 | 27,761 | 5,010 | 861 | 1,219 | 14,160 | 4,576 | ..... | 143,140 |
| SANITARY BACTERIOLOGY | | | | | | | | | |
| Dairy products | 20,796 | 42,168 | 23,622 | 12,510 | 12,780 | 11,424 | 16,716 | 13,626 | 153,642 |
| Water, drinking & pools | 37,190 | 38,646 | 27,088 | 11,978 | 11,134 | 29,390 | 28,768 | 25,712 | 209,906 |
| Pollution | 19,540 | 8,790 | 15,795 | 3,505 | 2,575 | 2,795 | 6,275 | 11,710 | 70,985 |
| Food (sanitary quality tests) | 2,190 | ..... | 1,043 | 14 | 84 | 3,787 | ..... | 21 | 7,139 |
| Food poisoning | 302 | 412 | 880 | 180 | 414 | 270 | 16 | ..... | 2,474 |
| Utensils | 68 | 246 | ..... | ..... | 40 | 1,098 | 51 | 42 | 1,545 |
| DENTAL CARIES BACTERIOLOGY | 5,906 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 5,906 |
| PARASITOLOGY | | | | | | | | | |
| Intestinal parasites | 49,556 | 21,896 | 9,402 | 12,098 | 8,515 | 11,887 | 3,419 | ..... | 116,773 |
| Malaria | 34 | 20 | 10 | ..... | 8 | ..... | 4 | ..... | 76 |
| MYCOLOGY | 13,347 | 33 | 141 | 69 | 12 | 228 | 63 | ..... | 13,893 |
| CHEMISTRY | | | | | | | | | |
| Blood | 13,894 | 10,133 | 3,500 | 5,869 | 1,439 | 1,438 | 3,690 | ..... | 39,963 |
| Spinal fluid | 812 | ..... | 217 | 1 | 5 | ..... | ..... | ..... | 1,035 |
| Urine | ..... | ..... | 597 | ..... | ..... | 39 | 420 | ..... | 1,056 |
| Toxicology & narcotics | 2,423 | ..... | 6,718 | ..... | ..... | ..... | ..... | ..... | 9,141 |
| Drugs & cosmetics | 47 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 47 |
| Water | 3,050 | ..... | 273 | ..... | ..... | 3 | ..... | 1,237 | 4,563 |
| Other | 4,143 | ..... | 10,956 | ..... | ..... | ..... | ..... | 652 | 15,751 |

## TABLE 11 (Continued)

## EXAMINATIONS PERFORMED BY FLORIDA STATE BOARD OF HEALTH LABORATORIES, 1965

| Examination | Jackson-ville | Tampa | Miami | Pensacola | Tallahassee | Orlando | West Palm Beach | Pinellas County | TOTALS |
|---|---|---|---|---|---|---|---|---|---|
| RADIOLOGICAL CHEMISTRY | | | | | | | | | |
| Water (ground & precipitation) | ..... | ..... | ..... | ..... | ..... | 10,032 | ..... | ..... | 10,032 |
| Air | ..... | ..... | ..... | ..... | ..... | 3,180 | ..... | ..... | 3,180 |
| Milk | ..... | ..... | ..... | ..... | ..... | 7,912 | ..... | ..... | 7,912 |
| Other | ..... | ..... | ..... | ..... | ..... | 20,104 | ..... | ..... | 20,104 |
| VIRAL SEROLOGY | | | | | | | | | |
| Hemagglutination-inhibition | 6,024 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 6,024 |
| Neutralizations | 460 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 460 |
| Complement-fixation | 24,168 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 24,168 |
| VIRAL ISOLATIONS (except rabies) | 4,866 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4,866 |
| Rabies—microscopic | 3,908 | 4,356 | 1,760 | 964 | 460 | 1,616 | ..... | ..... | 13,064 |
| —fluorescent antibody | 10,644 | 6,582 | 1,908 | ..... | 690 | ..... | ..... | ..... | 19,824 |
| —mouse inoculation | 560 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 560 |
| SPECIAL PROJECTS | | | | | | | | | |
| Salmonella typing | 8,634 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 8,634 |
| Diarrheal disease studies (AFEB) | ..... | ..... | 16,258 | ..... | ..... | ..... | ..... | ..... | 16,258 |
| Enterovirus studies | ..... | ..... | 1,007 | ..... | ..... | ..... | ..... | ..... | 1,007 |
| Arthropod-borne surveillance | | | | | | | | | |
| Isolations | 10,711 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 10,711 |
| Serology | 45,571 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 45,571 |
| Sanitary quality salad-type foods | 7,060 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 7,060 |
| Toxoplasmosis dye test | 5,790 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 5,790 |
| Mycobacterium studies | 1,950 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,950 |
| PKU infant screening study | 192 | ..... | 24,471 | ..... | ..... | ..... | ..... | ..... | 24,663 |
| Toxin in oysters | 52 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 52 |
| Airborne pollen studies | 708 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 708 |

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## TABLE 12

## SPECIMENS SUBMITTED TO STATE BOARD OF HEALTH LABORATORIES BY TYPE OF EXAMINATIONS, FLORIDA, 1965

| EXAMINATION | Number of Specimens | | | | |
|---|---|---|---|---|---|
| | Positive Specimens | | Negative | Unsat. | Total |
| | One of More Positive Findings | Positive for Findings Indicated | | | |
| SEROLOGY | | | | | |
| Syphilis | 33,052 | ....... | 695,250 | 10,528 | 737,830 |
| Agglutination & related tests | 297 | ....... | 2,276 | 68 | 2,641 |
| Typhoid | ....... | 36 | ....... | ....... | ....... |
| Typhus | ....... | 2 | ....... | ....... | ....... |
| Brucellosis | ....... | 12 | ....... | ....... | ....... |
| Tularemia | ....... | 4 | ....... | ....... | ....... |
| Heterophile | ....... | 247 | ....... | ....... | ....... |
| Other | ....... | 18 | ....... | ....... | ....... |
| Blood typing (Rh) | ....... | ....... | ....... | ....... | 14,587 |
| DIAGNOSTIC BACTERIOLOGY | | | | | |
| Diphtheria & associated infections | 3,810 | ....... | 3,143 | 8 | 6,961 |
| C. diphtheria | ....... | 64 | ....... | ....... | ....... |
| Vincents | ....... | 30 | ....... | ....... | ....... |
| Streptococci | ....... | 1,217 | ....... | ....... | ....... |
| Other | ....... | 4,307 | ....... | ....... | ....... |
| Tuberculosis | 5,051 | ....... | 46,097 | 2,260 | 53,408 |
| Sputum | ....... | 4,794 | ....... | ....... | ....... |
| Aerosol | ....... | 146 | ....... | ....... | ....... |
| Urine | ....... | 25 | ....... | ....... | ....... |
| Gastric | ....... | 38 | ....... | ....... | ....... |
| Other fluids & exudates | ....... | 47 | ....... | ....... | ....... |
| Animal inoculations (G.P.) | ....... | 0 | ....... | ....... | ....... |
| Gonorrhea—smears | 27,236 | ....... | 20,482 | 340 | 48,058 |
| Intracellular Gram negative diplococci | ....... | 7,677 | ....... | ....... | ....... |
| Extracellular Gram negative diplococci | ....... | 376 | ....... | ....... | ....... |
| Trichomonads | ....... | 5,068 | ....... | ....... | ....... |
| Yeasts | ....... | 2,637 | ....... | ....... | ....... |
| Vincents organisms | ....... | 382 | ....... | ....... | ....... |
| Many pus cells | ....... | 13,094 | ....... | ....... | ....... |
| Gonorrhea—cultures | 1,454 | ....... | 16,066 | 375 | 17,895 |
| Fluorescent antibody | 65 | ....... | 1,385 | ....... | 1,450 |
| Enteric infections | 1,801 | ....... | 55,791 | 166 | 57,758 |
| S. typhosa | ....... | 84 | ....... | ....... | ....... |
| Other Salmonella | ....... | 1,330 | ....... | ....... | ....... |
| Shigella (flexneri & sonnei) | ....... | 261 | ....... | ....... | ....... |
| Other | ....... | 190 | ....... | ....... | ....... |
| Blood cultures | 33 | ....... | 110 | ....... | 143 |
| Brucella | ....... | 0 | ....... | ....... | ....... |
| Other | ....... | 53 | ....... | ....... | ....... |
| Leptospirosis | 18 | ....... | 610 | ....... | 628 |
| Miscellaneous | 11,207 | ....... | 6,975 | 39 | 18,221 |
| Darkfield—T. pallidum | ....... | 84 | ....... | ....... | ....... |
| Chancroid—Ducrey's | ....... | 3 | ....... | ....... | ....... |
| Granuloma—Donovan bodies | ....... | 21 | ....... | ....... | ....... |
| Gonococcus in eye | ....... | 4 | ....... | ....... | ....... |
| Other eye smears | ....... | 95 | ....... | ....... | ....... |
| Other eye cultures | ....... | 75 | ....... | ....... | ....... |
| Urine cultures | ....... | 1,117 | ....... | ....... | ....... |
| Other fluids & exudates | ....... | 4,819 | ....... | ....... | ....... |
| Mycological examinations | ....... | 1,248 | ....... | ....... | ....... |
| Organisms for identification | ....... | 2,670 | ....... | ....... | ....... |
| Sensitivity testing | ....... | 448 | ....... | ....... | ....... |
| Other examinations | ....... | 623 | ....... | ....... | ....... |
| Miscellaneous special services | ....... | 360 | ....... | ....... | ....... |
| SANITARY BACTERIOLOGY | | | | | |
| Dairy products | ....... | ....... | ....... | ....... | 25,607 |
| Water, drinking & pools | ....... | ....... | ....... | ....... | 105,112 |
| Water, pollution surveys | ....... | ....... | ....... | ....... | 14,222 |
| Foods (sanitary quality tests) | ....... | ....... | ....... | ....... | 1,072 |
| Food poisoning | ....... | ....... | ....... | ....... | 400 |
| Utensil swabs | ....... | ....... | ....... | ....... | 1,546 |
| DENTAL CARIES BACTERIOLOGY | ....... | ....... | ....... | ....... | 3,147 |

## TABLE 12 (Continued)

## SPECIMENS SUBMITTED TO STATE BOARD OF HEALTH LABORATORIES BY TYPE OF EXAMINATIONS, FLORIDA, 1965

| EXAMINATION | Number of Specimens | | | | |
|---|---|---|---|---|---|
| | Positive Specimens | | Negative | Unsat. | Total |
| | One or More Positive Findings | Positive for Findings Indicated | | | |
| PARASITOLOGY | | | | | |
| Intestinal parasites | 19,019 | ....... | 97,754 | 1,516 | 118,289 |
| Hookworm | ....... | 4,788 | ....... | ....... | ....... |
| Ascaris | ....... | 4,212 | ....... | ....... | ....... |
| Enterobius | ....... | 3,399 | ....... | ....... | ....... |
| Trichuria | ....... | 1,709 | ....... | ....... | ....... |
| Other helminths | ....... | 166 | ....... | ....... | ....... |
| E. histolytica | ....... | 122 | ....... | ....... | ....... |
| Nonpathogenic amoeba | ....... | 4,568 | ....... | ....... | ....... |
| Flagellates | ....... | 2,900 | ....... | ....... | ....... |
| Other | ....... | 2 | ....... | ....... | ....... |
| Malaria | ....... | ....... | 38 | ....... | 38 |
| CHEMISTRY | | | | | |
| Blood | ....... | ....... | ....... | ....... | 36,808 |
| Spinal fluid | ....... | ....... | ....... | ....... | 621 |
| Urine | ....... | ....... | ....... | ....... | 1,056 |
| Water | ....... | ....... | ....... | ....... | 2,370 |
| Toxicology & narcotics | ....... | ....... | ....... | ....... | 4,635 |
| Drugs & cosmetics | ....... | ....... | ....... | ....... | 11 |
| Radiological chemistry | | | | | |
| Water (ground & precipitation) | ....... | ....... | ....... | ....... | 813 |
| Air | ....... | ....... | ....... | ....... | 794 |
| Milk (Sr90, Ce137, I131, etc.) | ....... | ....... | ....... | ....... | 489 |
| Other | ....... | ....... | ....... | ....... | 316 |
| VIRAL SEROLOGY | | | | | |
| Hemagglutination-inhibition | ....... | ....... | ....... | ....... | 1,506 |
| Neutralizations | ....... | ....... | ....... | ....... | 46 |
| Complement-fixation | ....... | ....... | ....... | ....... | 6,042 |
| VIRAL ISOLATIONS (except rabies) | ....... | ....... | ....... | ....... | 979 |
| Rabies (microscopic) | 79 | ....... | 3,524 | 64 | 3,667 |
| Dog | ....... | 4 | ....... | ....... | ....... |
| Cat | ....... | 1 | ....... | ....... | ....... |
| Raccoon | ....... | 32 | ....... | ....... | ....... |
| Skunk | ....... | 4 | ....... | ....... | ....... |
| Bat | ....... | 38 | ....... | ....... | ....... |
| Mouse inoculations | ....... | ....... | ....... | ....... | 560 |
| SPECIAL PROJECTS | | | | | |
| Salmonella typing | ....... | ....... | ....... | ....... | 1,439 |
| Diarrheal disease studies (AFEB) | ....... | ....... | ....... | ....... | 2,849 |
| Enterovirus studies | ....... | ....... | ....... | ....... | 246 |
| Arthropod-borne surveillance | | | | | |
| Isolations | ....... | ....... | ....... | ....... | 2,085 |
| Serology | ....... | ....... | ....... | ....... | 11,016 |
| Sanitary quality salad-type foods | ....... | ....... | ....... | ....... | 706 |
| Toxoplasmosis dye test | ....... | ....... | ....... | ....... | 386 |
| Mycobacterium studies | ....... | ....... | ....... | ....... | 122 |
| PKU infant screening study | ....... | ....... | ....... | ....... | 24,923 |
| Toxin in oysters | ....... | ....... | ....... | ....... | 52 |
| Airborne pollen studies | ....... | ....... | ....... | ....... | 25 |
| TOTAL | ....... | ....... | ....... | ....... | 1,333,575 |

## TABLE 13

## COMPARISON OF THREE SEROLOGY TESTS PROCEDURES FOR SYPHILIS ON 115 CLINICALLY DIAGNOSED PATIENTS, FLORIDA, 1965

| Clinical Diagnosis | Number Tested | Per Cent Reactive or Weakly Reactive | | |
|---|---|---|---|---|
| | | VDRL (a) | FTA-ABS (b) | TPI (c) |
| Primary | 17 | 70 | 82 | 47 |
| Secondary | 25 | 100 | 100 | 100 |
| Early Latent | 13 | 89 | 100 | 92 |
| Late Latent | 26 | 96 | 96 | 89 |
| Congenital or Serofast | 8 | 62 | 88 | 88 |
| Biologic False Positive | 26 | 85 | 15 | 8 |

(a) VDRL test procedure developed by the Venereal Disease Research Laboratory.
(b) Fluorescent Treponemal Antibody Test—absorbent modification
(c) Treponemal Pallidum Immobilization Test

## TABLE 14

## PROPORTION OF FECAL SPECIMENS POSITIVE FOR HOOKWORM AND ASCARIS, FLORIDA STATE BOARD OF HEALTH LABORATORIES, 1950, 1955, 1960 AND 1965

| | Percent Positive for Hookworm | | | | Percent Positive for Ascaris | | | |
|---|---|---|---|---|---|---|---|---|
| | 1950 | 1955 | 1960 | 1965 | 1950 | 1955 | 1960 | 1965 |
| Total | 18.8 | 11.2 | 7.8 | 4.1 | 3.3 | 4.6 | 4.4 | 3.6 |
| Pensacola | 34.0 | 13.9 | 15.9 | 8.4 | 1.1 | 2.2 | 2.5 | 2.2 |
| Tallahassee | 24.0 | 13.6 | 11.9 | 6.3 | 0.8 | 2.4 | 4.3 | 3.1 |
| Tampa | 20.0 | 17.4 | 9.1 | 3.8 | 3.4 | 6.2 | 5.1 | 3.0 |
| Jacksonville | 17.3 | 11.0 | 6.6 | 3.9 | 4.3 | 5.2 | 4.6 | 4.2 |
| Orlando | 8.1 | 4.0 | 3.5 | 1.4 | 1.0 | 0.9 | 3.0 | 2.2 |
| Miami | 4.0 | 3.9 | 1.3 | 1.1 | 4.3 | 7.3 | 3.7 | 5.7 |
| West Palm Beach | ...... | 7.3 | 3.0 | 5.3 | ...... | 7.8 | 7.1 | 4.4 |

## TABLE 15

## VIRAL AND RICKETTSIAL DIAGNOSTIC FINDINGS FOR 1519 PATIENTS EXAMINED BY FLORIDA STATE BOARD OF HEALTH LABORATORIES, 1965

| Etiology | Positive | Equivocal* | Total |
|---|---|---|---|
| RESPIRATORY | | | |
| Adenovirus | ..... | 40 | 40 |
| Influenza A. | 48 | 98 | 146 |
| Influenza B | 3 | 23 | 26 |
| Mycoplasma pneumoniae (Eaton's Agent) | 10 | 2 | 12 |
| Parainfluenza 1 & 3 | 3 | 9 | 12 |
| Respiratory syncytial | ..... | ..... | 0 |
| EXANTHEMS | | | |
| Measles (rubeola) | 1 | 9 | 10 |
| Murine typhus | ..... | ..... | 0 |
| Psittacosis—LGV | 3 | 20 | 23 |
| Q fever | 1 | ..... | 1 |
| Rickettsialpox—Rocky Mountain Spotted Fever | 1 | ..... | 1 |
| Vaccinia-variola | ..... | ..... | 0 |
| CENTRAL NERVOUS SYSTEM | | | |
| California encephalitis | ..... | 1 | 1 |
| Coxsackie virus types A9, B2, B4 | 4 | ..... | 4 |
| Dengue | ..... | ..... | 0 |
| Eastern encephalitis | 3 | 1 | 4 |
| ECHO virus types 6, 7, 9 | 5 | ..... | 5 |
| Herpes simplex. | 1 | 20 | 21 |
| Lymphocytic choriomeningitis | ..... | ..... | 0 |
| Mumps | 34 | 146 | 180 |
| Poliovirus. | 1 | 2 | 3 |
| St. Louis encephalitis | ..... | 5 | 5 |
| Western encephalitis. | 1 | ..... | 1 |
| TOTALS | 119 | 376 | 495 |

*In the case of a single serum submitted, or in the absence of a rise or fall in the antibody titers of paired sera, no interpretation possible as to etiology.

## TABLE 16

## EXAMINATIONS PERFORMED IN TUBERCULOSIS HOSPITAL LABORATORIES,*FLORIDA, 1965

| | Tampa | Lantana** | Tallahassee** | Total |
|---|---|---|---|---|
| Totals—excluding special studies. | 55,060 | 45,579 | 27,614 | 125,173 |
| Tuberculosis | | | | |
| Diagnostic | 17,161 | 16,563 | 13,320 | 47,044 |
| Drug susceptibility | 1,954 | 839 | 605 | 3,398 |
| Mycology | 939 | 156 | 655 | 1,750 |
| Miscellaneous bacteriology | 2,759 | 1,994 | 3,137 | 7,710 |
| Hematology | 13,130 | 9,918 | 3,966 | 27,014 |
| Clinical chemistry | 14,207 | 13,689 | 4,727 | 29,623 |
| Urine analysis. | 4,196 | 2,420 | 938 | 7,654 |
| Other | 714 | 0 | 266 | 980 |
| Special studies and reference tests. | 4,000 | | | |
| Comparative studies of Group IIIa AFB from different sources. | | | | |
| Mouse virulence—T.B., IIIa, & IIIb strains | | | | |
| BCG vaccinated mice challenged with IIIa soil isolates. | | | | |
| Drug susceptibility trials with Lincomycin | | | | |

*Operated under direction of Bureau of Laboratories; budgetarily supported by State Tuberculosis Board.
**Combined regional public health and hospital laboratories.

## BUREAU OF LOCAL HEALTH SERVICES

L. L. PARKS, M.D., M.P.H.
Director (to October)

ELTON S. OSBORNE, Jr., M.D., M.P.H.
Deputy State Health Officer
Acting Director

HUBERT U. KING, M.D.
Assistant Director

Included within the bureau are the Division of Sanitation, Division of Nutrition, Accident Prevention Program and Health Mobilization (Civil Defense) Program. The bureau gives clerical consultation and assistance to county health departments (CHD). The major responsibilities remained much as in the past but with the addition of new areas of interest and responsibility. Strong emphasis continued on the frequent contact with and visits to local departments. The bureau continued to be responsible for direct supervision of CHDs without a health officer. In addition to visits by the bureau director and assistant director, the relief health officer made frequent visits to give administrative and clinical assistance and supervision. Unfortunately, the relief health officer transferred to a CHD as director in October leaving this position vacant the remainder of the year. The director of the Accident Prevention Program and the Coordinator of Training gave the bureau significant assistance in visits to CHDs and with health officer recruitment.

Much time was devoted to meetings, study and planning with other bureau and CHD staff members in preparation for programs under the Office of Economic Opportunity (OEO). The bureau director spent much time in assisting in the establishment of two local OEO Programs in the state.

A major revision was made in class specifications and upward revision of salary scales for a majority of public health workers in the state. This necessitated much time and effort on the part of the bureau director and staff.

Other important activities, aside from specific ones of the various divisions and programs outlined later in this report, were consultation to county health directors and their staffs on general administrative problems; assistance in preparation of budgets and budget control; assistance in recruitment of local staff members, preparation of personnel papers and in the orientation and training of these employees; assistance and guidance in program planning and evaluation; and continued efforts to coordinate and improve local public health programs throughout the state in cooperation with local program directors and other bureau and division directors and staffs.

### CLERICAL SECTION

Since there are some 438 budgeted clerical positions with CHDs and frequent changes in these personnel, the work of the records consultants is highly important to the effective administrative operation of these CHDs. The records consultants made 33 visits to 31 counties for general consultation. Activities included assistance in training new clerical personnel, especially in smaller CHDs; budget preparation and control; reorganization of filing systems; assistance in maintaining bookkeeping ledgers, personnel manuals and similar documents; and assistance with problems relating to vital statistics. Also assistance is given to local staffs on personnel, budget and activity reporting matters. The consultants work closely with the Records Committee of the County Health Officers Association. During the year a number of records and instructions were reviewed with the committee, 11 records and 20 sets of instructions were revised and three records declared obsolete. One consultant acts as secretary to the Records Committee and the State-Level Records Committee. Continuous study is being made by the committees towards possible mechanization of the Monthly Report of Activities. This consultant is responsible for checking with Shipping and Receiving to insure that adequate supplies of all records are kept on hand and assists in the preparation for printing of new records.

Essential data are maintained in the bureau for each CHD for budget control items, CHD budgets and a table of organization. Data for state, MCH, and other statistical reports on behalf of CHDs are supplied by the bureau.

### COUNTY HEALTH DEPARTMENTS

There were no changes in the basic organization of CHDs during the year. There were 25 single county departments, nine bi-county units and eight tri-county units — for a total of 42 county health units for the 67 counties.

During the year, 61 physicians were employed full time in the general public health programs. In addition 61 served in special programs making a total of 122 full-time physicians employed in CHDs. Four local directors resigned, one retired, six new local directors were appointed and one transferred to another unit. At the end of the year, there were four health officer (director) vacancies in the state.

Financing: Budgets for the fiscal year 1965-66 total $13,346,868 with $8,537,010 from local contributions; $2,120,000 from state formula funds; $575,399 from other state funds; $1,035,360 from federal funds and $1,079,099 from local budgeted reserve funds. The Legislature appropriated for the 1965-67 biennium a $250,000 increase in funds for county health units over the previous biennium.

#### Highlights of Local Programs

Table 18 is a statistical report of CHD activities indicating the number and type of the services rendered. However, the following summary is designed to present some of the more unusual and outstanding program developments during 1965:

*Baker* — In addition to some improvement and expansion of general programs, the Community Nursing Program expanded greatly during the year with 205 home visits made. The Child Spacing Program has been well received by local doctors and the community. The CHD continues to participate in the Vaccination Assistance Program with good results. Supervision of midwives continues to be an important function since 40 per cent of births in this county are attended by them. The schools are cooperating with the CHD in securing a better health program for schoolchildren. The preschool examinations were most successful with more corrections of defects than in previous years. In the sanitation program, three public water supplies were chlorinated — two serving subdivisions and one serving a recreation area in Osceola National Park. Improvements were made to the city sewage treatment plant eliminating complaints about odors.

*Bradford* — With the employment of an additional public health nurse, services were expanded to include care of the sick at home. The Bradford County Public Health Nursing Advisory Council was organized and chartered in November, 1964. It is believed that significant progress was made on this program. Donations were generous so that there is now a well-equipped loan closet which members of the council operate. The council has been instrumental in securing volunteers to assist with mass X-ray clinics, mass immunization clinics and examination of children for camp. The home nursing care program has been well received and active with 94 patients referred for nursing and physical therapy visits and 1678 visits made. The council presented an exhibit at the county fair using an automatic slide projector to show the work of the council and the CHD. The Child Spacing Program continued to grow with 179 admissions during 1965. Bradford County was one of the first in the state to participate in the Head Start Program. Public health nurses (PHNs) assisted in compiling a list of eligible children and informing parents about the program. Physical examinations were given to 124 children by the health officer; local dentists assisted with dental examinations. Immunizations, tuberculin skin tests and examinations for intestinal parasites were included. PHNs visited the various centers while the program was in operation. During the latter part of 1965, a modern sewage treatment plant was completed at Starke replacing the existing outdated and overloaded plant constructed in 1942 and, in addition, eight miles of new sewer lines and three lift stations were added. Cost of the project was $655,000. The CHD played a major role in planning and securing this new facility. With assistance from the federal government and CHD, the town of Brooker constructed a municipal water supply system where none existed before. The Arthropod Control Program, under direction of the CHD, purchased an additional dragline and bulldozer from the Florida Development Commission. One new sanitary landfill was added in the county making a total of five landfills serving all towns and communities.

*Brevard* — Ground breaking ceremonies for the new Rockledge Health Center were held early in the year and construction continued on schedule with the building expected to be occupied early in 1966. Plans for the new Titusville Center are on the drawing board and land has been acquired for the new Melbourne Center. These two centers are expected to be completed late in 1966. The CHD received a special Tuberculosis Control Project Grant which will be used to decrease the incidence of tuberculosis in the county. A new PHN was employed in the program. A venereal disease clinic was established in March for the examination and treatment of indigent patients. In February, the county commissioners adopted a resolution approving use of temporary septic tank agreement forms by the CHD. These forms will allow interim use of septic tank facilities where soil and ground conditions permit while enhancing future feasibility of establishing sanitary sewerage service. The commissioners retained a consulting engineering firm to do a countywide study of solid waste disposal and refuse problems for immediate and long-range improvements. The shellfish program received greater emphasis during the year with employment of a shellfish specialist. Discussion of a depuration plant for the county is taking place. The Brevard County Utility Board has been established and adoption of the budget and filling of positions will greatly increase the attention given to water and sewerage problems in the county. A complete revision of the sanitation and engineering departments has been approved and is now in effect enabling the entire Environmental Health Division to function more effectively with one person now heading the total program.

*Broward* — During 1965 the staff moved into a new $370,000 headquarters center at Ft. Lauderdale with plans for expansion to a second and third floor. Plans are being made for a new $200,000 health center at Hollywood to keep abreast of the growing activities. A new dental clinic was provided in the Pompano Health Center. All of Broward County's dumps, except one in the northern part of the county (Deerfield), will have been closed by the end of 1965. Approved incinerator facilities provided by the county and the cities of Hollywood and Ft. Lauderdale will take care of all garbage through 1970. Wherever trash is involved, plans have been submitted to the CHD for approval to eliminate nuisances and possible contamination of the water table. No small incinerators are permitted. Neither are commercial laundries allowed to be installed unless connected to sanitary sewers. The new law restricting use of septic tanks has enabled the CHD to negotiate with all cities in the county to minimize new septic tank installations and make the final move toward providing all business and suburban areas with sanitary sewers. The county commission saw fit to have a bill passed enabling a study for ocean outfalls — which, if successful, would mean 100 per cent disposal of wastes from sanitary sewer connections in the county — as well as significant collateral economic advantages. A large expansion of the public swimming pool program has resulted in Broward County's probably becoming the third largest in the world. Complete chemical analyses, in accord with USPHS standards, on all public water supplies has allowed CHD surveillance over this important property. Very excellent training programs, including operator training during the year and a tri-regional short school, have been important in increasing efficiency in operation of water and sewage plants. Of particular importance to the air and water pollution program as well as to some special studies was the installation of an environmental laboratory at the main center with employment of a full-time chemist. To enhance efficiency in operation of water and waste water plants, an emergency communication system was set up. A special air and water pollution bill was passed, enabling the CHD to set up a special commission which now awaits resolution and financing by the county commission. Inspection and sampling of frozen desserts was initiated during the year. Groundwork was laid for control of temporary food establishments operating for short periods of time. Several foodhandling training courses were held during the year. A special program of inspecting food service establishments at night — at which time we suspected an overloading of facilities — has been very revealing and has enabled the sanitarians to conduct some advisory inspections for the benefit of the public and management. A cross-connection between a sewage lift pump and a water supply was discovered — leading to a complete review of a particular engineering operation which might be the cause of future cross-connections. A special local childcare center law was passed to include not only health and emergency aspects of such care but also requiring upgrading of educational facilities. The CHD participated in Operation Head Start involving 1501 preschool children. A survey was done in 26 secondary schools on services of PHNs in these schools. It is believed a closer working relationship with the schools will result from this study. A small epidemic of hepatitis at the Seminole Indian Reservation was controlled using gamma globulin. An extensive tuberculosis control program is now in full swing as is a medical care program for migrants. A research project on the epidemiology of ascaris continues. The director of the CHD is actively participating in the newly established Ft. Lauderdale Safety Commission. The health educator participated in a successful Health Fair for the county and in an all day Venereal Disease Seminar for all health coordinators. A great increase in admissions to the part-time child spacing clinics pointed up the need for full-time service — which is being implemented. A glaucoma trailer is now in operation in the county. The Broward County Medical Association has also approved use of a diabetes trailer for detection of early diabetes. Following very heavy rains in the area, the CHD brought to the attention of the county commission the great need for secondary drainage (storm sewers) in the county. Public voting will take place on this issue early in 1966.

*Charlotte* — The CHD played a vital role in planning and implementing the health program in the Head Start Project. Eighty-five children were enrolled in five classes at two centers. Physical examinations were done by the health officer with blood counts and urinalysis performed at a private laboratory. Immunizations included trivalent oral polio, diphtheria, tetanus and measles vaccines. Dental examinations were done by the CHD dental preceptee. Vision and hearing screenings were completed. In addition, height and weight, IP study and tuberculin skin tests were included. Motion pictures on health and safety were shown. The nursing staff actively participated in this project and is following up some of the children. The nursing staff completed a time-cost study of services. A Planned Parenthood Program was initiated. With the addition of a dental preceptee to the staff, a dental health program was begun. The SBH mobile X-ray trailer visited the area for 10 days. The staff conducted Medical Self-Help Courses using the new films available. The nursing care program for sick at home continues to increase as more retirees move into the area. The department was host to the Gulf Coast Conference with an excellent program on lung cancer and respiratory diseases presented by Dr. Charles Tate. The sanitation department of the CHD awarded certificates and pins to 207 persons completing a food service training course. Food service personnel from the two local hospitals and seven school lunchrooms actively participated in the program. During the year, five such courses were conducted with an estimated 50 per cent of the industry participating. It is expected that these training courses will be continued and expanded.

*Citrus* — A new health center was completed at Inverness with local funds — $9000. The staff moved into the new quarters in April.

*Clay*—1965 completed a full year's use of the new health center. The most outstanding effect of this beautiful, modern building has been the improved status of public health. Complete dental equipment has now been added. A new auxiliary health center was opened at Orange Park. Space is provided by the city in one of their new central buildings. The center is equipped by the CHD and staffed by PHNs on regular schedule. This is the second such center in the county. An additional PHN was employed making added services possible. The first Red Cross Volunteer Program, formerly "Gray Lady Program," was organized and operated successfully. In the fall, a second program was organized. The staff, with assistance from the county home demonstration agent and auxiliary of Clay Memorial Hospital, organized and taught medical self-help classes. The staff was also active in the local community action group and is represented on the board of directors of a four-county group to plan Economic Opportunity Programs. Clay CHD continues as a field teaching center for public health nurses. An enabling act passed by the last Legislature has made it possible to initiate a comprehensive rabies control program. A pound has been established for confinement of suspect animals. Countywide zoning has been established to promote orderly growth of residential and business areas. Building, plumbing and electrical codes are enforced in inspection of all construction projects. Further steps have been taken in planning a new municipal sewage disposal system for Green Cove Springs and final plans are expected to be completed at an early date.

*Dade* — Probably the outstanding event of the year was establishment of a program to provide comprehensive care for high-risk maternity and infant patients in Dade County. With many cooperating agencies and groups, a complete range of outpatient and inpatient services are offered. The project was made possible by a Children's Bureau grant of approximately half a million dollars the first year. This represents the largest single project grant ever received by this CHD. The CHD engaged in three activities financed by the Office of Economic Opportunity (OEO). One of these projects is a two-chair, mobile dental unit which serves schoolchildren in poverty areas. Another project conducted a part of the local Community Action Program (CAP) providing health screening for underprivileged preschoolers and first graders, plus considerable assistance with year-round follow-up services. This is, of course, quite similar to Head Start Programs in other communities. Federal funds in the preceding projects total some $130,000 for the first year. A third OEO-sponsored activity in which the CHD participates is the Metro-Neighborhood Youth Corps. The CHD employs over 30 of these youngsters. An unfortunate highlight of 1965 was Hurricane Betsy. The aftermath of this storm placed an additional load on CHD personnel, particularly the sanitarians and engineers. Nearly 40 tons of food found unfit for human consumption was destroyed. The major water problem was a break in the pipe to Key Biscayne. In the field of sewage treatment, considerable progress was made. Miami started work on sewer extensions for the Cocoanut Grove area; Northern Dade County began a seven mile ocean outfall line; and Opa-Locka approved a sewer system. Regarding public water supplies, several special taxing districts were established in Dade County — Miami and new efforts made to extend municipal supplies to residents of unincorporated areas. Air pollution control activities steadily increased during the year and a full-time pollution control officer was finally appointed to administer the program.

The Migrant Health Project completed its second year of operation and family health services clinics conducted under this program were quite active. Migrants made 3410 visits to temporary facilities and 1437 visits to regular CHD clinics. Nearly 5000 migrants were X-rayed and four patients with active tuberculosis were hospitalized. The Cuban Refugee Health Program increased sharply near the end of the year with resumption of flights from Cuba. The CHD screened over 3000 new arrivals in December. This is in addition to the daily load of about 300 outpatients seen at the CHD diagnostic and treatment center, Freedom Tower. Epidemiological and ecological pesticide studies continued in Dade County. This included investigation of acute poisonings, surveillance of occupationally exposed persons and special renal studies, in addition to monitoring of water, food and human tissues. The PHS Community Health Services Project Grant for the coordination of services to patients with long-term illnesses terminated on June 1; however, local support enabled the program to continue. In cancer control, nearly 5000 patients had cervical cytology examinations with intensive follow-up of 100 suspicious and positive cases. The chronic disease program was also stimulated by the acquisition of a capable director of Research and Epidemiology who began plans for several cardiovascular disease control projects. Great improvement in the hospital and nursing home surveillance program was noted during the year.

*Duval*—1965 was a year of many changes. Following the retirement of Dr. Thomas Morgan in July, the proposed merger of the Duval CHD and City of Jacksonville Health Department has not materialized; however, new services are being added and old ones strengthened. A new maternity clinic was added to the three existent clinics in outlying areas. Beginning in September, in cooperation with NE Florida Family Planning, Inc., the CHD incorporated family planning services into all maternity clinics. The research project in birth control in conjunction with Duval Medical Center continues to enlarge with 300 patients registered. Additional special clinics for family planning have been held in areas of high demand. In August, the CHD participated in the Head Start Project furnishing use of the mobile dental trailer and services of a dentist. Routine immunizations, tuberculin and hemoglobin testing were also done on project children outside the city limits. Follow-up clinics were held in September and October. Funds for an intensified tuberculosis control program were appropriated in July. A Clerk and two PHNs were employed and are at work on the TB register, tracing suspects, contacts and cases with significant improvement in records and field work. This project is to serve both city and county and it is obvious more personnel and space will be needed to handle the anticipated volume of work. The CHD is working closely with the staff of the new Juvenile Shelter and has been instrumental in initiating VD instruction for the staff and in establishing a VD screening routine for the

inmates. Young children in the emergency child care area are screened with PPD tests and stool exams. Referrals to Duval Medical Center for medical care and communication with the center have been much improved by CHD staff members and use of a referral form devised by the CHD. Nursing home beds have increased from 997 to 1144 with two new homes being added and two older ones closed as older homes are being phased out and replaced with more modern facilities. The use of the physician-nurse-sanitarian team for nursing home inspection and licensure has upgraded standards of care. Communication between Duval Medical Center and nursing homes, nearly non-existent before, have been markedly improved through efforts of the CHD team. The Medical Self-Help (MSH) Program has continued to expand with a much greater demand for new classes. In some cases, this program has been combined with Red Cross First Aid. Some 3715 high school students and 3852 other citizens completed the MSH course during the year. In sanitation much has been accomplished but much remains to be done. Five college students were employed to assist in the field work connected with a countywide survey of environmental health conditions. A comprehensive report of this survey was printed and was in such demand it was out of print within a week. Garbage franchise areas have been set up by the County Commissioners for the entire county. Water sampling of oyster harvesting areas was intensified during the year. Most of the northern waters have been declared pollution-free and suitable for oyster harvesting. A new County-City-Industry Air Pollution Commission is in process of being established as a result of the air quality survey begun early in 1965. The sanitation division began a program to train sanitarians to perform maintenance and operative inspections of public swimming pools. Much progress has been made toward more stringent enforcement of county rules governing individual sewage disposal systems and disposal of septic tank sludge. Intensified inspection of food processing and catering services brought about stronger enforcement of code requirements. The weed law enacted by the last Legislature was implemented. Over 3000 complaints of weeds, debris and other noxious material were investigated to determine existing or potential health hazards. Acceptance of the program has been favorable and many potential health and safety hazards eliminated. Sanitarians participated in the training program for water and sewage plant operations.

*Escambia*—Some developments in Escambia County during the past year are: letting of a contract by the City of Pensacola for construction of a $3,000,000 sewage plant complex which will greatly help reduce pollution in Pensacola Bay; success in securing extension of sewer laterals north on Palafox Highway at a cost of $75,000, which will serve the business complex and two large schools eliminating use of temporary sewage facilities; installation of a central water supply for the Walnut Hill area, which will eliminate use of numerous individual wells; and completion of plans for central water system for Gonzalez and Lagoon areas on Gulf Beach.

*Gadsden* — The CHD joined the SBH Vaccination Assistance Program in 1965. Ninety additional children were immunized (over last year), about a three-tenths per cent increase. Cancer education classes were begun with cooperation of the American Cancer Society and local physicians. Attendance was disappointing. The Negro Garden Circle had the grounds at the new health center landscaped. Planned parenthood requests increased by one-third during the year. A slight decline in both white and Negro births was noted — 75 less than the preceding year. One new midwife was trained and one retired at age 74 having delivered 3512 babies in her 28 years of practice as a licensed midwife. Lack of funds prevented filling PHN positions. Plans call for beginning at least two, and possibly three, small sanitary landfills with an educational program to get people in the vicinity to carry their garbage and rubbish to the closed landfill if not using commercial pick-up service. Signs will be posted at areas not approved for dumping forbidding further use. The CHD will be in contact with the County Commissioners to secure necessary legal backing.

*Hamilton* — The most significant event in Hamilton County in many years occurred during 1965 with completion of a $10,000,000 phosphate mine operated by the Occidental Corporation of Florida. This has caused the CHD to direct a major part of its attention to the health aspects of industrial development and concurrent activities. This industrial development has presented a welcome challenge to the CHD and county. It is pleasing to see a vigorous economy developing even though there will be problems and challenges to the public health program. In addition to the present mining facilities, Occidental has a $30,000,000 chemical complex under construction and plans to double mining activities by the end of 1966. The home nursing, school health and other programs of the CHD have been affected by this industrial development and it is expected that activities of the CHD will increase.

*Hardee* — A dental preceptee joined the staff of the CHD in January, 1965 and a well-established dental program is now in operation. All children in the first, third and fifth grades as well as part of the seventh and eighth grades were screened for dental defects with referral to private dentists or the CHD clinic for dental care. Of 78 children admitted, 53 completed treatment. During the "summer round-up" children entering school for the first time received dental inspections. As part of the President's War on Poverty Program, a local Community Action Program was established for migrants. At present, there are nine workers and a supervisor. These workers are attempting to establish a day care center in the migrant area of the county, and several recreation programs have been established. They provide tutoring, hold sewing classes and furnish transportation to and from clinics. During 1965 a Planned Parenthood Program was initiated. Forty-five women are participating in the program. Private physicans provide physicial examinations and write prescriptions. The medically indigent are furnished birth control drugs without charge. Under sponsorship of the Mid-TB and RD Association, SBH and CHD, a mass mobile X-ray survey was conducted in October in addition to two other X-ray surveys in the county during the year. The Hardee CHD is one of the CHDs participating in the Unclassified Mycobacteria Study. Bronchial washings are being done on participating patients and soil samples are being submitted for study.

*Hillsborough* — During 1965 a demonstration project in Communicable Disease Control got underway. The project is sponsored jointly by the USPHS, SBH and CHD. Project objectives are varied in scope, but the ultimate goal is to motivate individuals to alleviate communicable disease control problems which exist in their communities. The data collection phase began with a comprehensive environmental sanitation survey of Tampa, Port Tampa, Plant City and selected rural areas. Eighteen sanitarians participated in the survey of 38,995 premises. Each was inspected to determine conditions of the housing unit, water supply, refuse storage, presence of delapidated outbuildings, junk automobiles, etc. The data were analyzed at the University of South Florida. Subsequently, pertinent information has been disseminated to the public through news media. Survey information has been used to stimulate clean-up campaigns in low socioeconomic areas in Tampa. Five campaigns directed toward 115 city blocks have been instituted. A mobile clinic truck was obtained and is being used in areas not close to established CHD clinics. Under auspices of the Economic Opportunity Act, the CHD actively participated in Operation Head Start, a countywide program designed to aid culturally deprived children. During the past four years, the Hillsborough CHD has provided a service unique to CHDs in Florida; an occupational health program designed to serve employed persons at the place of employment. This program has been designed to accomplish two objectives: improvement of the working environment and to increase general health awareness among workers and employers. This program has been implemented by services of an industrial hygienist and a PHN working exclusively in industry. Original plans included a complete study of one type of industry and the program progressed. The shrimp processing industry was chosen for this phase of the study. Reasons for this choice were: (1) this industrial complex employs 3000 persons in the county, making it one of the chief employers; (2) this industry is responsible for over one-half of all industrial diseases reported to the Florida Industrial Commission from the county; (3) most of the workers are from the lower socioeconomic group and perform tiring work of long duration often in unpleasant surroundings; and (4) health services in the industry are for most part non-existent. After evaluation of these factors, it was decided that a health service program in this complex would be of value to employers and employees. During 1964 visits were begun to four large processing plants on a weekly or semi-monthly basis. Several plants were visited less often according to need. Fishing fleet workers and dock loaders were also included in the program. The PHN consultant established a schedule for regular visits to the four plants visiting each at a time when employees could be reached without interference of work. Visits were designed to give workers an opportunity to discuss health matters with the PHN who could help with counseling and referral; assist management in improving first aid practices and create awareness of responsibility for employees' health; to instill in workers awareness of their own health situation and to prompt reporting of injuries and illness occurring as a result of their work; aid in control of dermatitis; plan health education programs for workers; and encourage better habits of health and hygiene among workers and their families. A special course in first aid and safety for supervisory staff of one company was conducted by CHD staff. This resulted in improved conditions at the plant. Observations of processing and interviews indicated the chief cause of dermatitis to be immersion of the workers' hands in water for prolonged periods rather than the shrimp per se. Most cases are reported among shrimp peelers with few cases among breaders and packers. Most employees are concerned with family health problems, and welcome PHN visits. A monthly health bulletin board is prepared for these workers. During 1965, 200 visits were made by the PHN to these plants. Forty persons discussed work-connected illnesses and over 1500 were counseled about non-occupational health problems. Nearly 1000 screening tests were done. Two additional plants were added to the study in 1965. The PHN has attempted to motivate the two largest plants to employ a full-time industrial nurse on their company staffs. Recommendations to the study plants included the following: (1) that more time be devoted to health maintenance — this should include establishment of better first aid programs with a daily log of visits to this facility; (2) pre-employment interviews for health status; (3) early reporting of all cases of dermatitis to management; and (4) use of a protective barrier cream by all workers coming in contact with shrimp. The CHD began an in-service training program offering certificates in various subjects of public health importance. The first certificate was given in epidemiology for an eight-weeks' course conducted by consultants from the USPHS and SBH. Award of certificates was contingent upon passing a comprehensive examination on the entire subject matter. Of 30 taking this course, 24 received certificates. A second course on medical terminology for five weeks is planned with 30 persons enrolled. In April a new monthly periodical began publication entitled "Health Beam." Purpose of the publication is to explain projects, programs and plans underway at the CHD; give education in all areas of public health sciences; and to take official notice of accomplishments by people in public health in the CHD and Florida. The Vaccination Assistance Project is being conducted in lower income neighborhoods with immunizations against smallpox, polio, diphtheria, whooping cough and tetanus. Community Health Workers (CHW) are employed and work, door-to-door, in low income areas to determine if the children are up-to-date on immunizations. Those needing immunizations are scheduled for clinic appointments at the CHD. If the parent does not follow through, the CHW makes a revisit to find out why and gives new appointments. Three to four visits may be necessary. In 1965 with four staff CHWs more than 6000 children received necessary immunizations.

*Indian River* — Early in the year the staff of the CHD moved into the new building adjacent to the old facility. With additional space and equipment it has been possible to start a maternity and family planning clinic manned by local obstetricians. The old CHD quarters now house county and state welfare offices, the mental health staff and loan closet. This facilitates administration of the home nursing and hospital programs. As a result, services are showing an increase. The home nursing service has developed so well that a homemaker service was added. Sixteen homemakers were trained in a joint program with the Indian River Junior College. So far services have been limited to paying patients. Lack of funds to provide care for indigents and for the supervisor's salary has presented a major problem for which a solution is being sought. A new membrane filter water testing lab has been completed and put into operation. This year also saw completion of the sanitary survey of the entire area of the Indian River in the county.

*Jackson* — A new dental service was established during 1965. A full-time dentist and dental assistant are employed. The mental health program has been expanded and a full-time mental health worker has been assigned to the county. In addition, a clinical psychologist and a social worker from the Bay County Guidance Clinic hold clinics half a day each month in Jackson County. The PHNs and mental health worker of the CHD participate in these clinics.

*Lake* — A new $35,000 auxiliary health center was completed at Clermont. Plans call for a new headquarters center at Tavares at an estimated cost of $150,000 with construction to begin during 1966. Due to efficient operation and realistic tax millage, the CHD has had good financing for the past 16 years without an increase in millage until 1965 — at which time a 16 per cent increase was necessary and was approved. Lake County completed its thirteenth consecutive year without a reported case of rabies in dogs. In 1952-53, this county had one-half of the rabid dogs in the state. That year, a rabies control law was enacted with the excellent results outlined above. The county still maintains a rabies control officer. A 75 per cent increase in tuberculosis was reported in the county. This increase is believed to be due not only to an actual increase of the disease but also to more intensive casefinding efforts. Four hundred children were given physical and dental examinations and immunizations in the Head Start Program. An expanded program is underway for 1966. Marked effort went into the Child Spacing Program. Contraceptive information and pills were given wide distribution. The birth rate appears to have been decreased seven per cent. Added momentum is expected to further relieve this potential overpopulation burden. The Arthropod Control Program was expanded during the year. Attendants are now assigned to all sanitary landfills. Three cities have joined in the purchase of 134 acres to meet their needs for many years to come. Three new trucks, another dragline and two bulldozers have been added. Two large steel barges (29 feet long) were purchased for use as floating foundations from which to operate ditch digging draglines across areas. A savings of $4000 was effected on fogging operations with many mechanical improvements to equipment being adopted. Much of the staff's attention was devoted to study of the safety and effectiveness of insecticides in 1965 and will continue at an increased pace during the coming year.

*Lee* — The sanitarians of this CHD conducted an intensive survey of housing conditions in a depressed area at Fort Myers. It was found that the only property in poor condition from the standpoint of safety and health was rental property. The findings were presented to the officials of Fort Myers and Lee County who instructed the CHD to take corrective action. With this support, the CHD is beginning to get better compliance with the State Sanitary Code, city ordinances, building codes, electrical codes and other laws related to health and safety. Owners of the property involved have been for the most part very cooperative. Although the CHD feels this is a big step forward, it is realized that this will of necessity be a long term project. The Migrant Program has been progressing slowly. A night clinic for migrants conducted by a participating physican and two PHNs is now operating. Many private physicans and dentists are rendering care to migrants in their offices upon referral by the PHNs. A second night clinic is planned for another part of the county.

*Leon*—A very important development for the CHD was the construction of a new building. This is an extremely well-designed and functional two-story building to provide ample space and equipment for growing program needs. In addition to air conditioning, a greatly needed conference and staff meeting room was provided. Also a two-way radio system will be installed for use by the sanitation staff and dog catcher. A long hoped for dental clinic for the indigent is being planned. Cost of the building was approximately $430,000 under the Hill-Burton Program. During 1965 there were no serious epidemics. There was a total absence of polio in line with the national decrease. However, there has been an increase in venereal disease among young people, also in line with the national pattern. A PKU testing program was begun on newborns seen in the home and in clinics. A Packaged Disaster Hospital was stored in the county at Chaires. This site about 18 miles from Tallahassee makes the hospital readily accessible. Serious illness if not death was prevented among local citizens by the alertness of one of the milk sanitarians. In talking with the driver of a farm pick-up tank truck, it was learned that one of the plant producers had lost a number of cows the previous night and others were sick possibly due to poison. A hold order was placed on the tank truck with the milk suspected to be contaminated. Through the cooperative efforts of the State Department of Agriculture, Gadsden CHD and State Regional Sanitation Consultant assisting the Leon CHD, the milk was found to be heavily contaminated with poisonous pesticides. This producer was prohibited from sale of raw milk for pasteurization until it could be established that his milk was free of contamination. It was learned that the pesticides reached the cows through contaminated peanut hulls. A comprehensive study was done by the environmental health division of wrapped commercial sandwiches sold by commercial food processors. This study was done to determine the potential for food poisoning in such sandwiches. Samples involved were both random and specific with laboratory controls for comparison. Fifty-five samples were analyzed over a three-month period. Results proved correct the standard theories about keeping food refrigerated and not keeping perishable food over three days even under refrigeration. Also brought to light was evidence confirming contamination of foods during the wholesale phase of delivery before reaching the food processor. Such foods as ham, cheese and spiced meats were investigated. As a result, all food processors in Leon County have been advised that effective January 1, 1966, all wrappd sandwiches will be kept refrigerated from time of manufacture until delivery to the retailer. As of March, 1966, all retail displays must be refrigerated. Looking forward to 1966, the CHD expects a definite increase in all activities. In addition, the implementation of a dental education and inspection program is being planned. Expansion of the Planned Parenthood Program is expected using present participants to publicize the program among their neighbors. A probable increase in the Head Start Program is anticipated. Much study and planning for implementation of the Medicare Program are underway. To meet the demands of new and expanded programs, it is expected that additional financial support will be needed.

*Manatee* — A Rodent Control Program was begun in August. It is directed by a staff sanitarian and employs Youth Corps workers and based in Palmetto. The Migrant Project began operation in May with the employment of a full-time PHN and sanitarian. Critical shortage of migrant housing has led to definite plans for construction of several new camps to be completed next year. A nonprofit corporation, the Manatee County Seasonal Agricultural Workers Council, was incorporated in July. This council is composed of interested and qualified citizens devoted to improvement of migrant health and welfare. The Community Action Fund has opened a day care center for migrant children in Rubonia and Palmetto. The large multi-service day care center to accommodate 100 migrant children opened at Palmetto in January, 1966. The VISTA Camp, formerly located in Pinellas County and now located at Tallevast, has graduated three classes, and has 91 students enrolled. A new 105 bed nursing home opened during the year. A large Methodist Retirement Home is under construction at Bradenton and will house 170 with a 22 bed nursing home unit. The Presbyterian Retirement Home, in operation several years, was recently licensed as a home for aged with 165 beds and a 25 bed nursing home unit. The Manatee Memorial Hospital expects to expand from 284 to 500 beds. The Mental Health Association was rejuvenated and became very active, spearheading a drive for a psychiatric unit in addition to the approved hospital expansion. A local safety council was newly organized and has several important programs underway. A study of low percentage of postnatal returns and examinations as well as low neonatal examinations prompted the CHD staff to investigate the causes. As a result, the rate increased in 1965. Pap smears were done on all patients returning for postnatal examination with several referred to the Tumor Clinic. There were 42 tubal ligations in 1964 (23 per cent) and 29 (20 per cent) in 1965. About the same number were placed on oral contraceptives with the remainder receiving Emko VJ or counseling only. Some 88 Gynecoils were inserted in 1965. A Pap smear clinic for ADC patients has recently been established. A diabetes survey was conducted in rural Myakka City with detection of five new cases. The $20,000,000 county water supply program is now under construction with a target date for opening in August, 1966. An 1800 acre reservoir is being created by construction of a 5000 foot earth fill dam with impervious core which will hold a 23,000-acre-foot storage pool at an elevation of 40 feet above mean sea level. The water treatment plant will have an average design of capacity of 12 MGD and provide complete treatment. Two hundred and fifty miles of lines will deliver water to about 18,700 customers. Port Manatee is expected to be developed at Piney Point but is temporarily being held up pending ICC hearings for a new railroad from Polk County to the Port. A $15,000,000 granular superphosphate plant is under construction at Piney Point. A Pollution Control Program has been established under direction of a new CHD sanitary engineer. Baseline data are being analyzed and calls for employment of a chemist, engineering aide and secretary. The rabies control program was radically revised and improved with immunization rate of dogs increasing from 25 to 50 per cent.

*Marion*—The new CHD director spent much time in attempting to streamline administrative procedures and to strengthen administrative checks to insure compliance with SBH regulations and directives, with Florida statutes and county policies and procedures. New office equipment, rearrangement of offices and telephones, and more positive definitions of organizational policies and responsibilities — all aided in achieving better administration. Nursing records were changed from individual records to the family folder envelope system. Much time was devoted to study and preparation of the CHD budget. Many factors had prevented adequate implementation of the Merit System salary scale. A satisfactory budget was approved by the commissioners allowing all personnel, (except the director) to be reclassified and promoted to the pay grade approved by the Merit System with an average of 10 per cent pay increase. It also authorized an additional staff sanitarian. The year saw an increase in school health program activities. The local School Health Committee recommended that venereal disease education be included in the curriculum in the tenth grades. A countywide X-ray program was carried out in the fall in addition to regular casefinding activities. Of a total of 8702 X-rays, 224 cases of pathology were found. Special educational efforts to control venereal disease were made in the communities and schools through conferences, talks and showing of films. Cooperation of private physicians in reporting cases has been sought with considerable success. Casefinding and contact investigation were pursued vigorously. A Head Start Program was begun by a church group and did not have adequate medical planning, staffing or budgeting. The CHD took the initiative on a rather crash basis in planning for physical exams with the county medical society and approximately 750 physical examinations were accomplished. Routine immunizations, vision screening and tuberculin testing were accomplished at the various schools by PHNs. Lack of funds for correction of defects was discouraging. Future Head Start Programs are expected to be under auspices of the superintendent of public instruction. The Health Committee of the Marion County Medical Society will direct medical planning. In an effort to better coordinate health activities and more effectively utilize health resources, all voluntary and governmental health groups and professional organizations in the county were invited to participate in forming a Health Resources Committee. All 19 of those invited accepted and five organizations overlooked in the original list asked to be included. This committee will meet quarterly to discuss health programs, health education, to explore avenues of solving health problems presented which affect the general public, to coordinate health programs to avoid conflicts, and in general to offer advice and assistance to organizations promoting health education and services. Marion County has a unique Mental Health Program. A county psychiatrist, whose salary is paid by the county and state, is permitted to engage in part-private practice. With this method of financing, a smaller community has been able to attract a highly specialized physician that it might not have obtained. No one is refused care for lack of money since the arrangement allows reduced fees for those able to pay part fee or no fee at all if completely indigent. The psychiatrist and mental health worker work closely with the welfare department, school counsellors, probation officers, local law enforcement officers, and mental health association. A 15 bed ward has been designated as the psychiatric unit in the hospital. The ward has been full with a need for more beds indicated. The MHW and PHNs work together in following patients in the home especially those on trial visit or discharge from state hospitals. The year saw a significant increase in activities and visits under this program. The Home Nursing Care Program continued to be very active with 1164 visits. The PHN staff was responsible for setting up and manning an exhibit of public health nursing at the State Paramedical Convention at Silver Springs. Although sanitation was handicapped by lack of adequate staff, it had a productive year. One hundred and three water systems were installed including seven public systems and three systems for subdivisions. In addition, seven new sewage treatment plants were installed to serve motels and other establishments. The sewage treatment system for Dunnellon was completed which will eliminate much of the pollution of the Withlacoochee River. Considerable time was also devoted to supervising the following activities: installation of septic tanks; inspection of public swimming pools, mobile home parks and camping areas which are very popular in this area, school plants, garbage disposal, food establishments and other related activities. The special water treatment study in cooperation with the University of Florida and SBH continued. Flooding of low lying areas and overflowing lakes continue to be a source of concern and study by the CHD staff.

*Monroe* — Immunizations in schools are being discontinued with plans to increase the number of immunization clinics in an effort to centralize and expedite early completion of the annual school immunization program. It is believed that the Vaccination Assistance Program has been successful due to cooperation of Navy personnel and local physicians. Part-time services of a VD investigator has expedited patient care and follow-up of contacts. Consolidation of records has been accomplished. Family planning clinics are held for indigent married mothers. Patients are examined by the health officer and drugs dispensed under his supervision monthly. The PHNs have regular visits with patients to detect unusual symptoms. The dental clinic had to be discontinued in July due to lack of funds; however, dental screening with referrals of schoolchildren will continue. The screening will be done by local dentists donating their time in annual inspections. A dental program continues in the schools under guidance of the dental society and supervision of PHNs. Tooth brushes and paste for indigent children were furnished by a supply house. An alphabetical log of indigent patients is in process to separate diagnoses for active use in follow-up nursing care on all chronic diseases. A Cervical Cancer Detection Clinic has been set up on a monthly basis with the health officer doing complete examinations and Pap smears. A local pathologist donated his services in examination of lab tests. This clinic includes welfare recipients over 40 years of age screened by the welfare department and PHNs. A registry is maintained on all patients under supervision of the CHD. An annual diabetic "Drypak" program is conducted through the school system sponsored by the local medical society in cooperation with school officials, PTA volunteers and PHNs. Simultaneous distribution of Drypaks to adults through schoolchildren has resulted in far-reaching coverage for the detection of diabetes. Follow-up nursing care in the home has been intensified on all cardiac conditions referred to the CHD by local physicians, the welfare department and other agencies. A Mental Health Association was organized which in turn established a local Phoenix Club for social guidance of hospital returnees. The Veri-Visible file provides ready information on status of patients and will be used for survey of community needs. Two-way radios have been ordered for installation in sanitarians' cars to provide immediate communications which is expected to provide better service in this geographically elongated county. Continuation of a mobile clinic covering seven stations provides regular weekly clinic services in the Lower Keys. In April, with community cooperation, an old restaurant renovated at Marathon was converted into a well-equipped health center for the Middle Keys. The local sanitarian supervised this project. The Baptist Church at Tavernier houses a monthly clinic established early in the year by the area PHN. The effects of Hurricane Betsy were mitigated by the fine preplanning, surveillance and alert supervision of all county, city, civil and military agencies.

*Nassau* — A large lot was purchased by the county commissioners and another county building to house a civil defense emergency operating center will be built early in 1966. About 1200 square feet will be available to the CHD for an auxiliary health center. Much time was devoted to civil defense by the CHD staff during the year. The county is well-organized in all phases and plans have been distributed to all responsible department heads. Medical and other professional staffing of the local hospital has been assigned. The Packaged Disaster Hospital will be moved to Hilliard and in a CD emergency will be staffed by doctors and nurses from Duval County. The Vaccination Assistance Program begun in 1964 and continued during 1965 has been quite successful. Over 276 children have received immunizations in this program. The Nassau County Resource Development Planning Group was organized with health, education, welfare, recreation, tourism and family life committees to be appointed soon. The health officer has suggested a number of worthy health projects with the hope that two or three might be accepted by the final committee. The PHN staff has continued work in the generalized program but has assumed new duties and added emphasis to some ongoing activities. The PHNs continue to help in the organization and teaching of Medical Self-Help Classes. During the mobile X-ray survey in June, 3926 people received chest X-rays. Of this number, 31 were diagnosed as suspicious for tuberculosis, seven suspicious for lung tumors, 17 for cardiovascular conditions and 43 for other pathology. Follow-up X-rays and visits have been made. The number of patients participating in the Child Spacing Program is increasing with referrals from private physicians. The mental health program has improved with closer working relationships with state hospitals, local physicians, child guidance clinics, school personnel and the CHD staff. Definite needs in Nassau County are felt to be: an approved, well-staffed nursing home for the sick and aged — perhaps smaller homes having adequate medical resources nearer patients' homes; facilities for medical care of indigent children; closer rapport with specialists in the field of child guidance — perhaps a team making regular visits to the county for testing, evaluation and therapy. Heavy rains during the NE Florida Fair inundated the grounds resulting in insanitary conditions on the grounds and in food service buildings. Meetings were held by the health officer and sanitarian with local and state officials and the health officer was delegated to meet with the county commissioners to secure funds for making corrections. The commissioners approved the necessary funds and provided labor to improve drainage, build roads, fill low areas and rebuild several old concession stands. Six new stands were also built with concrete floors, screens and two-compartment sinks. A local bill was passed by the 1965 Legislature to provide for the impoundment of dogs biting humans or suspected of rabies. A team from Taft Sanitary Engineering Center, Cincinnati, conducted an air pollution survey in the fall and a USPHS team conducted a survey for water pollution in the Amelia and St. Marys rivers. Follow-up surveys are scheduled for 1966.

*Okaloosa* — The most unusual program development in Okaloosa County was in the field of Civil Defense. A Health Mobilization Coordinator (HMC) was employed to coordinate, plan and institute programs relating to natural and man-made disasters. Also included among his duties are responsibility for promoting the Medical Self-Help Program and custodianship of the Packaged Disaster Hospital. The HMC has been responsible for development of a comprehensive plan to cope with any type of disaster. These plans will be distributed to all key community people responsible for CD activities so that they will be prepared to participate and to implement the plans. All line and staff positions have been assigned and accepted by the participants. An organizational chart depicting all levels of activity has been devised and will be revised as necessary. Excellent cooperation has been secured from community people, local officials and military leaders.

*Orange* — The CHD has added a section to its Division of Environmental Health by rescheduling existing personnel to full-time work in the field of radiological and occupational health. A full-time dentist and dental assistant have been added to the staff. This has permitted an expansion of the dental program, especially in the schools at the first, second and third grade levels. First grade students usually have this program scheduled during the first month of school acclimation. The program consists of lectures on proper care of the teeth with toothbrush demonstration and movies backed up by distribution of dental health literature. A thorough dental examination is also included. The CHD is making a concentrated effort to improve methods used in cleaning and sanitizing locker and shower rooms, bathing facilities and general building sanitation. The Orange CHD is now organized and working in a Planned Parenthood Program distributing contraceptive information and materials. This is the second year of the Migrant Labor Project in this county and much time has been devoted to upgrading sanitary standards in camps and promoting better nutrition. The Tuberculosis Project is also in its second year and results show its increasing effectiveness in locating active cases and contacts. A full-time health educator has been employed. After an intensive training period with the Division of Environmental Health, he is conducting the Food Service Training Course for food service workers.

*Osceola* — A new program has been set up in cooperation with the Central Florida Tuberculosis and Health Association whereby more frequent surveys are possible by rotation of mobile units previously used only in Orange County. Planning sessions have also begun with county authorities in anticipation of the problems connected with development of new tourist attractions, such as Disneyland, moving into the area. A countywide landfill program is now in full operation.

*Palm Beach* — A major accomplishment in general administration of public health services in the county was the organization of a Division of Public Medical Care in the CHD. This division has assumed responsibility for medical care activities formerly conducted in the County Welfare Department. At the present time, activities include the conduct of outpatient services providing generalized and specialized care to welfare patients, supervision of hospital service for indigent patients, rehabilitation services and coordination of patient care activities. Plans are underway for development of home care services. A Division of Health Education was activated by transfer of the health educator for the Migrant Project to this division as its full-time director. A second health educator was employed for the Migrant Project. A new Division of Maternal and Child Health has also been established. Notable progress has already been made under the director's leadership in further development of the school health program. A Division of Administrative Services has been established to assume many responsibilities of non-medical administration. Included are fiscal and personnel matters, purchasing, transportation, supply and communications. Approval was received from the USPHS for an air pollution control program. A chemist and air pollution control specialist have been employed and a laboratory facility has been established at Lake Worth. Hi-vol air sampling is being carried out at four monitoring stations. New activities in sanitation include a program to improve sanitary facilities in rooming houses; a follow-up program on pesticide poisonings (three deaths have occurred out of 56 cases reported); participation in adult education classes in waitress training; participation in a junior college course in hotel and restaurant management; and cooperation with the *Aedes aegypti* Eradication Program in development of a film entitled, "Enemy in your Home." The Division of Public Health Nursing organized a Home Nursing Service in the northeastern part of the county. This is the third combination service in the county. PHNs are also involved in setting up nursing services under the Division of Medical Care. An interesting cooperative relationship has been developed with Florida Atlantic University in which the CHD staff has been involved in teaching programs. Staff members have helped teach a course on school health in the College of Education and a health course in the Continuing Education Program is planned for next year. Several special institutes have been conducted in cooperation with the university.

*Pasco-Sumter* — The director reports that the high incidence of hookworm in the area presents a major challenge. It is believed that although slow progress has been made in the past, it is now time to launch an intensive eradication program. Another serious problem involves pollution of drinking water. Coliform contamination in wells at various depths is becoming more frequent. Local attack is most difficult since the ground water flows into the area from counties both north and south. A thorough study of the problem is recommended by the director. Preliminary plans have been prepared for two new health centers to be located at Dade City and New Port Richey. Each is expected to cost approximately $100,000 and it is hoped that construction will be underway during 1966. In Sumter County, the health center at Bushnell has had a number of improvements. County commissioners and other officials have been most cooperative in support of the program in both counties. The director plans to continue a research project on trichomonal lysosomes in causation of chronic disease.

*Pinellas* — The CHD reports that a duplicating department was established during the year with a full-time employee. Such equipment as a 914 Xerox machine, offset press, electric paper cutter and paper drill have added to the overall efficiency and communications of the department. An Employees' Information Manual was printed and issued to each employee. The Visiting Nurse and Homemaker Service completed the third homemaker training course in November — 24 homemakers now trained. The agency has been requested by the SBH to be an orientation center for other supervisory personnel planning homemaker services. A case of tuberculosis in a student and later in a teacher resulted in a mass PPD testing program in one of the local schools. The Federal Vaccination Assistance Program was discontinued in July. At present the CHD is sending letters only to those living in areas designated as having low immunization levels. Special immunization clinics have been set up in areas where transportation to regular CHD clinics is difficult. A night clinic and Saturday clinic have been established for children of working parents with good attendance. The Research Division established in 1958 was discontinued in August, 1965. A report of this work has been published as one of the monograph series of the SBH and is entitled "The Aged and Chronic Disease: Research in a Local Health Department." A Division of Maternal and Child Health was created in September with a staff physician appointed director to assist in coordination and planning of programs with the Nursing Division. The dental staff participated with dentists in the annual schoolroom inspection program. Of a total of 35,743 dental inspections, the CHD staff inspected 10,783. In the Mental Health Program, the Emergency Health Service continues to be the most active aspect of the total program. The emergency services are used 24 hours a day seven days a week. During the latter part of the year, the Pinellas County Commission initiated and accepted for investigation a proposed plan for consolidation for all community mental health programs. The plan proposes to incorporate the Mental Health Division of the CHD with a county hospital. The Division of Chronic Illness reports a marked increase in expenditures for hospitalization under the HSI Program. After studying possible ways to reduce hospital costs and length of stay, the Division established three programs: (1) Community Referral Service — designed to insure continuity of care and help reduce hospital stay of patients with limited incomes. PHNs visit two hospitals each day and plan for early discharge of patients who can continue treatment at home with aid from community services, e.g., VNA and Homemaker Service; (2) Health Information Service — organized to obtain current information essential to the director and staff in evaluation of existing programs and future planning. Answers to basic questions are secured from a representative sample of the population. Approximately 100 households are interviewed each month; (3) Interagency Conference — composed of persons representing welfare and health agencies responsible for administering several jointly financed and closely interwoven programs. Shared responsibilities include licensing and payment for care in hospitals and nursing homes and other activities. In cooperation with the local medical society, diabetes screening clinics have been set up for detection of diabetes and hypoglycemia. Two clinics each week are held at the CHD, St. Petersburg. Suspected cases of diabetes are being found at the rate of about three persons per 100 tested. The possible cause of at least some types of alcoholism is being investigated in these clinics. A glaucoma screening clinic has also been opened with more than 2000 persons examined since October, 1965. Glaucoma was detected in about 3.5 per cent of those tested. A study to investigate possible relationship between soil environment and cancer continues. During 1965, the Pinellas CHD strengthened its Air Pollution Control Program despite failure of a specific pollution control bill in the Legislature. A countywide network of 32 dustfall stations was established as a continuing index to particulate pollution. Sufficient equipment was secured to give the CHD reasonably good capability in conducting area and source sampling. This has enabled the CHD to take advantage of new emission standards adopted by the SBH. Stack (source) sampling has already been conducted with assistance from the SBH. The CHD has instituted further restrictions governing installation of incinerators in or near residentially zoned property. A refresher course in food service for all school cafeteria managers and supervisors was conducted with 200 new employees receiving training. This training program has been expanded to include 504 employees from 19 large food service establishments. An exhibit was provided at the Annual Food and Food Equipment Show in March. The CHD was officially designated by the SBH the responsibility for control of radioisotope users. It is the first and to date the only CHD to have this capability. An industrial hygienist position was approved and a new occupational health program was initiated. Surveys of 220 industries and 30 technical studies were made involving detection of various contaminants which could affect workers' health. An evaluation of all environmental health activities was completed and reassignment of work responsibilities was made. In the health education program, the following activities were conducted: a Teen Quackery Jamboree to acquaint high school students with medical quackery; a Youth Conference on Smoking and Health for student leaders from junior and senior high schools; a pilot workshop on VD education conducted for selected teachers for one junior high school and St. Petersburg Job Corps for Women.

*Polk* — In February the county commissioners approved plans for a two-story addition to the present health center at Winter Haven which will house administrative and sanitation offices. Cost of the project will be $90,000 with $27,000 from Hill-Burton funds. Construction was begun in November with completion expected about May, 1966. In cooperation with the local medical society, a master plan for an emergency mass polio program was drawn up. The PHNs and mental health worker assisted in planning a countywide meeting on mental retardation held at Lakeland in March. The CHD cooperated in the educational program for the State Youth Power Nutrition Conference held at Winter Haven early in the year. Polk County was one of two counties to participate in the Mass Cervical Cytology Program in cooperation with the American Cancer Society, Florida Division. The program was begun in July for a one year period. The CHD is doing screening tests on indigent women. The CHD director was instrumental in coordinating the Polk County Mental Health Planning Council. A major activity of this group was a survey of mental health needs in the county, and as a result much progress has been made. An unusual case of animal rabies was reported with numerous human contacts. Twenty-six persons received treatment as a result of exposure to a rabid puppy brought into the county from Michigan by a migrant family. The persons involved were primarily from one large family with the exception of several neighborhood children. In October, the community nursing program was extended throughout the county with organization of the greater Lakeland Council for Community Nursing, Inc. Other activities being continued are the Migrant Program, Dental Preceptor Program, and Vaccination Assistance Program. In December staff members cooperated with other groups in organizing a local Community Action Program under the State Economic Opportunity Program. An increase of infectious syphilis among some high school students stimulated plans for a VD educational program in the school curriculum.

*Putnam-Flagler* — Outstanding development in this unit was the migrant health program.

*Santa Rosa* — The Home Nursing Program continued to expand during the year. In 1964 there were 97 admissions to this service with 1535 visits. In 1965 this increased to 159 admissions and 2249 visits. The Santa Rosa County Health Council, representing a cross section of the county, is very active and the local medical society is supporting the program with referrals. The marked increase in requests for service has presented some financial problems. The second workshop for school principals was held in March and was well received. It is expected that this type activity will help improve the school health program in the county. The CHD participated in Operation Head Start sponsored by the County Board of Education. The local Association for Mentally Retarded Children has been very active this year. A school for these children has been established on a temporary basis with hopes for a permanent one. The Tuberculosis Eradication Program is maintaining vigilance but it is disappointing when the moble X-ray unit was able to complete only 2564 chest X-rays with a potential of 26,000. Results from the CHD tuberculosis survey giving Heaf and Mantoux tests to over 5000 school students indicated the cost and time of the survey did not justify its continuation — no active cases of tuberculosis were found. Topical fluoridation was started on all new patients attending dental clinic the last six months. During this period, the dental preceptee presented programs on dental health to eight PTA groups. The preceptee also participated in the Procter & Gamble Company's Dental Health Education

Program by presenting programs in 14 schools. A filmstrip and record were used as aids in presenting these programs primarily in the third grades to 1130 children. In addition, an instruction course for dental assistants was established by the dental preceptee as part of a program to train volunteer assistants in the Gray Ladies Organization. A handbook for assisting in the dental clinic was provided with examinations on the subject matter. Twelve Gray Ladies are participating as volunteer dental assistants and meet at the CHD each month. A Planned Parenthood Program under direction of the County Medical Society was begun. The Vaccination Assistance Program has been well received with plans to begin measles immunization early in 1966. The PHNs are continuing their in-service education program with emphasis on needs elicited in the Home Nursing Program. Greatest needs appear to be in the area of heart disease. The PHNs attended a workshop sponsored by the West Florida Heart Association. Milton has completed the addition to its sewage treatment plant which should help eliminate pollution of the Blackwater River. A local bill was passed which provides prosecution for any further pollution of this River. A new water system in the Pace area was completed. Three new sanitary landfills were initiated. The Arthropod Control Program has improved. The first ditching operation with a new dragline was started and acres of swamp land have been drained. Four fogging trucks were in operation. New equipment worth $18,000 was obtained for the program. A CD Packaged Disaster Hospital was received by the county.

*Sarasota* — The CHD is now participating in the Migrant Program. A full-time PHN, sanitarian and a part-time clerk have been assigned to the program. This work is being extended through use of the VISTA Program. The CHD planned with the Board of Public Instruction for an eight-week Head Start Program. Three PHNs were assigned to the program with local physicians doing physical examinations in their offices. This was considered a very satisfactory program with many children benefitting. During Diabetes Week, a screening program was conducted in three areas with tests performed by volunteers from the Lay Diabetes Association, county medical society and CHD. A number of programs on poison control were presented at PTA and other meetings by the medical director of the Poison Control Center (PCC), supervising nurse of the PCC, and a PHN. The county dental society has been active in the school health program and in working with the dental preceptee. A local dentist was assigned to each school to serve as consultant and assist in dental education. Local dentists have also done some of the screening in secondary schools. The dental society purchased two films and the Junior Woman's Club purchased one for dental education in the schools. Services to patients in maternity clinics on planned parenthood have increased with plans underway for operation of a Planned Parenthood Clinic. Classes for expectant mothers have been started in connection with the Booker Community School with good results. Efforts have been made to work with young unmarried mothers in informal class setting with part of each class devoted to making layettes and bassinets, demonstrations in use of powdered milk, etc. Nursing students from Manatee Junior College and from the Licensed Practical Nurse School in Sarasota are given observation in the field with PHNs. A new set of professionally prepared slides is being used with a tape recording telling the story of the Combination Nursing Program in the county. In addition to PHNs, VNA board members are presenting programs to many community groups. Emphasis for the year in the Environmental Sanitation Program has been on overall coverage of all environmental health services called for by state and local code requirements. Each sanitarian has been assigned a given territory and is evaluated on completeness of duties performed. The sanitation staff has been testing the new coding system originated by a committee of the Environmental Health Directors Association and authorized by the director, division of sanitation, for a six-months trial. The new system gives more complete data which totals for each program: number of establishments, number inspections, number conferences and accomplishments. It is expected this new coding system will be compatible with data processing and will give much more accurate and comprehensive information. With increase of "package" sewerage systems being installed in the county, a new inspection form has been developed in addition to a daily operational form for all "package" owners. This will have a built in self-inspection system which places emphasis on daily or preventive maintenance. Heretofore, this has been lacking. Similarly, this same system has been working with more than 100 public swimming pools now in operation in the county. The CHD has started training sanitarians in one or two specialties so that more technical programs such as radiological health, shellfish and dairies will be better understood and programs conducted more effectively. However, it is believed that employee morale is highest with a generalized program as opposed to a completely specialized one.

*Seminole* — A glaucoma detection clinic was started in October with financial support from the Sanford Lions Club and donations from SHEBA. To date, 305 persons have been examined with six cases of glaucoma and eight suspects found. The Sanford Lions Club also donated a second Titmus eye machine enabling the CHD to perform more eye examinations with more efficient screening. Intensive casefinding and education for syphilis continues. Mass VD serology testing was conducted in several selected schools with a number of positive bloods found. All jail inmates now receive routine blood tests. Dental programs were instituted in the schools with emphasis on the first three grades. Loan of a portable dental unit and use of a Dentamobile from the SBH helped provide added services. A cervical cancer screening clinic (Pap smears) was instituted in May. Four cases of cancer were found and referred for treatment. Pap smears are done routinely on all prenatal, postpartum, and child spacing patients. Mass tuberculin testing using the Sterneedle was begun. A 200-bed Packaged Disaster Hospital was received in August. A medical Self-Help Course was added to the school curriculum with 700 students completing the course. An animal control law is now being enforced with an animal shelter authorized for early 1966. Annual dog inoculations against rabies continue. The program to eradicate the *Aedes aegypti* mosquito is in progress. The Gray Lady Program continues with 190 capped to date and other classes scheduled. A home for special care of retarded children has opened. The Home Nursing Program continues to grow with an increasing number of doctors' referrals — 1593 visits in two years. The local hospital has begun operation of a Poison Control Center. The mobile chest X-ray survey was completed in November with 5767 persons X-rayed. One case of tuberculosis, 28 suspects, and many with other pathology were found. Two thousand and sixty-one children were treated for intestinal parasites. A Migrant Program was planned to begin operation in 1966. Several new wells to increase water supply to Sanford were added; fluorides will be added to the water supply.

*St. Johns* — Although the CHD has no formal visiting nursing program, limited home care is provided by the PHNs upon request from local doctors, hospitals and clinics. A large part of this service is devoted to demonstration and encouraging the family to assume responsibility for care where possible. Regular maternity clinics are held at the CHD with referral to the hospital clinic at the seventh month. Home visits are made by the PHNs within 48 hours after delivery. In addition to providing nursing care for 12 heart patients, educational materials on heart disease was placed in each school library. Insulin was provided for 41 diabetic patients with home visits by PHNs. A relative-testing program was conducted on families of diabetics. One thousand, seven hundred and fourteen students in the first, second, sixth and twelfth grades and nursery schools were skin tested for tuberculosis. No positive cases were found. The CHD investigated a child with positive tuberculin test referred from a private doctor and it was found that raw milk drunk by the family was reported contaminated with Type III Unclassified Mycobacteria. Further studies, including soil samples and sputum examinations on the family are continuing. The CHD provided home services to patients and families of both typical and atypical tuberculosis. More emphasis was placed on school health education during 1965. Workshops on nutrition, personal hygiene, VD and drop-out problems were conducted during the year. The director and nursing staff examined all first grade students and those engaging in school sports. Immunization clinics were conducted in all schools in the county. The CHD provided medical assistance for enrollees in the Job Corps Program. The CHD devoted time to the Accident Prevention Program especially in follow-up of poisonings. The PHNs made home visits and attempted to educate families involved; aspirin and other internal medications continued to lead the list with two-year-olds the leading age group. There were nine cases of reported attempted suicide — all females in the 13-19 age group. Educational material on accident prevention was placed in all school libraries. In the visual testing program, 905 tests were done with 122 referrals. The local Lions Club provided financial assistance for referrals and glasses. Sixty-six patients were referred to tumor clinics and 30 were hospitalized. PHNs made home visits to teach bedside care to families. In the CDC program, epidemiological investigations more than tripled due to three cases of diphtheria in one family, food poisonings and salmonella referrals. The PHNs and sanitarians cooperated with local physicians in testing county employees and inmates in the county jail following an episode of food poisoning. Immunizations were given to the inmates. The PHNs visited crab plants giving immunizations and health cards. Over 200 persons were treated for intestinal parasites during the year. The Planned Parenthood Program was active with instructions and/or contraceptive materials being supplied to patients — 92 patients on oral type and 107 on foam VJ. Care of five premature babies was supervised by the PHN staff. Newborns with feeding problems constituted a large number of those seen in infant clinics. A number with congenital defects were found. Nursery schools were provided with health education materials. Immunizations and tuberculin testing was also provided in two such schools. There were 109 children enrolled in the Head-start Program during the summer. The CHD assisted with medical screening and immunization of these students. Immunization clinics were held during the summer in six rural areas for pre-school children. In the Mental Health Program, the PHNs were members of the Outpatient Service Committee of the local mental health association. PHNs visited 31 patients giving direct service or referring patients to other agencies. There were 23 patients admitted to state hospitals — 11 first admissions and 12 returned from trial visits. The CHD continued to cooperate with other community groups in the Civil Defense Program — especially in plans for staffing first aid shelters. Periodic inspections of nursing homes were continued. Rehabilitation and nutrition programs were conducted for operators with assistance from the SBH. Staffs and patients of all homes were X-rayed. The sanitation staff was limited by two vacancies during the year. The staff placed great emphasis on health education with 76 lectures and talks, 28 audio-visual programs given and 6 radio programs. Foodhandler courses were given for all public schools, State Deaf and Blind School, and prison cafeteria personnel. The food service industry has been a specialized program the past year. Over 300 establishments are in operation in the county. A primary goal for the coming year is greater coordination between the CHD and the Hotel and Restaurant Commission and Florida Department of Agriculture. Foodhandling instructions and demonstrations were conducted in two crab plants with the result that bacterial counts have decreased in these plants. Crab plants and oyster houses are inspected monthly with samples collected for laboratory examination. Oyster houses are using the heat-shock-shucking method approved by the USPHS which requires industry cooperation and frequent inspections to insure compliance. A survey of the shoreline along all waters affecting oyster areas was conducted. Fifty-seven raw sewage outfalls were found and 45 have been corrected with the remainder under notice to comply. The city of Hastings approved a feasibility study for a municipal water system and sewage treatment system.

*Suwannee* — The CHD began a new program for screening more diabetic patients and participated in planning a tri-county Economic Opportunity Program for Hamilton, Lafayette and Suwannee to include a dental care program. The City Council of Live Oak favorably received and is considering a recommendation by the CHD for fluoridation of the city water supply. Discussions were held with the county commissioners concerning the building of a new health center at Live Oak under the Hill-Burton Program. Plans were laid for developing a VD education program in the junior and senior high schools.

*Union* — Lake Butler began a new sewage and water works improvement project made possible by a Federal grant under PL-660. Cost of the project is over $660,000. The city entered into an agreement with the state to furnish water and sewage service to the new Diagnostic and Reception Center just south of the city. This undertaking has placed Lake Butler among the few small cities in Florida with the best of public facilities for future growth. A low-cost housing project of 42 units was constructed at Lake Butler which will eliminate a large part of substandard housing in the community.

*Volusia* — Two elections were held in the county to permit fluoridation of public water supplies. The election was favorable at Daytona Beach and its water supply will be fluoridated serving some 50,000 people. The election at Deland was unfavorable. Several years ago Ormond Beach voted fluoridation and now supplies fluoridated water to about 12,000 people. The Volusia county school system adopted a slightly modified Medical Self-Help Program for high schools. A full semester each year will be devoted by students to this course. Three additional Gray Lady Programs were organized making eight schools now having this service. A VD education program for high schools is being planned to reach all high school children in the county. For several years, the CHD has used one or another of the various contraceptive pills. Recently, Halifax Hospital, which has the largest clinic in the county, began use of intra-uterine devices (Lippes Loops). The CHD cooperated with the County School Board in the operation of the Head Start Program in June and July. More than 500 children were given physical examinations, immunizations and tests for intestinal parasites. Treatment was given for hookworm and as many corrections of physical defects as could be carried out in twelve weeks were made. Followup continued but it was extremely difficult to find these children once the program ended. The Board of County Commissioners secured a surplus office building at Deland for exclusive use by the CHD. Architects are now working on plans for repair and renovation of the building as a health center. The *Aedes aegypti* Eradication Program began in July. A staff of nine workers are responsible for some 20,000 inspections completed to date. Areas of high infestation were discovered along the east coast and in Deland. Plans call for spraying operations and elimination of breeding areas. The Halifax River continues to present a problem due to pollution which has closed the river for more than 15 miles for oyster and shellfish production. A new sewage plant at New Smyrna seems to have greatly improved the problem in the Indian River south of Edgewater. This section of the river, from Edgewater south to the county line, is now approved for shellfish production.

*Walton-Washington-Holmes* — The tri-county health unit began a new $102,000 program for expanded health services to people in the area with funds from the Economic Opportunity Program. The purposes of the expanded program are: (1) to expand existing family health services and give in-depth services to economically deprived families; (2) to provide dental health services, not previously available, to the economically deprived; (3) to provide more health supervision which is very limited at present in some areas; (4) to provide health education programs and services to professional and non-professional workers in this program. Staff for this new program will include a physician and health educator to serve the three counties and one PHN, one sanitarian and one clerk-typist for each of the three counties. The counties will also provide dental services for deprived children. The project originated in Holmes County in the fall of 1964 and was developed because of an expressed need for expanded health services by leaders from official agencies and community organizations. Much of the credit for this program goes to the dedication of the staff of the Holmes CHD and their alertness to future needs for health services in their county. Because of the limited population in Holmes County, the Office of Economic Opportunity (OEO) did not look with much favor on the project but suggested that such a project should serve at least 25,000 population. OEO therefore suggested that since the three counties were designated Rural Renewal Areas a tri-county organization be formed through which project funds could be obtained. In March 1965 the Tri-County Community Council, Inc., was organized and approved by local governing boards in each county as the legal administrative body to receive OEO funds. The health project was therefore re-written to include the three counties. OEO approved the plan with minor revisions. In July Dr. W. G. Simpson was appointed director for the tri-county health unit and fell heir to the task of working out details of administration of the project. In November a Memorandum of Understanding between the SBH and Tri-County Community Council was signed. Funds for the project became available in December. A physician, one nurse and three clerical personnel have been employed. Holmes CHD began participation in two other programs which show progressive activity toward better health. A sanitary landfill program was started as an extension of the Mosquito Control Program in an effort to eliminate open garbage and waste dumps over the entire county. The nursing program was expanded to include home nursing care service with 26 admissions and 336 visits.

## ACCIDENT PREVENTION PROGRAM

The purpose of this Program is to provide guidance to the county health departments (CHD) in the expansion of accident prevention activities in home, school and off-the-job safety. Traffic and industrial safety continues to be the responsibility of other agencies; however, this Program cooperates with the Florida Industrial Commission (FIC) and the Florida Highway Patrol (FHP) in the promotion of safety.

The Automotive Crash Injury Research Program which began in Florida in 1964 has continued with the FHP, the Florida Medical Association (FMA) and the Florida Hospital Association (FHA) cooperating in six-month periods of investigations of highway accidents in which late model cars are involved. During the past year the program was concluded in one troop area, conducted in another and now has moved to a third area.

The poison control activities continue and were highlighted by the week of March 14 which was designated by Governor Haydon Burns as Poison Prevention Week. A kit of educational materials was sent to the chairman of each poison control center along with suggestions for local programs. Poison prevention exhibits were used by the Hendry and the Orange CHDs at county fairs in these areas, and more than 50,000 antidote charts previously made available were distributed by personnel of the CHDs.

The Accident Prevention Program assisted the Agricultural Extension Service of the University of Florida in establishing chemical education groups in each county. Kits containing information regarding the safety practices which should be followed in handling and storing chemicals were made available to each county agricultural agent; the director also participated in a number of meetings. The interest in poison prevention which followed resulted in two additional hospitals being designated auxiliary poison control centers bringing Florida's total to 32.

In cooperation with the Bureau of Maternal and Child Health, a "Guide for Teaching Poison Prevention in Kindergartens" was reproduced and made available to CHDs. More than 1000 copies were distributed to kindergartens throughout the state.

The fire demonstration kit obtained last year continued to be used at in-service training meetings held at several CHDs, and at meeting of groups interested in accident prevention.

In the snake bite survey, which began in 1962, a total of 331 bites were reported during 1965 compared with 251 for 1964 and, of these, 218 were reported as bites by venomous snakes. For each case a report is sent to the physician who treated the patient and he then forwards a clinical history to the FMA Subcommittee on Venomous Snake Bites. A total of 198 questionnaires were returned by snake bite victims and 161 clinical reports were received from doctors who treated patients.

Personnel of the Manatee CHD have used the Hazard Report form this year in locating and eliminating various accident hazards noted during routine visits. This form is being evaluated as a way of recording the accident prevention activity of nurses and sanitarians in their daily work.

In our efforts to improve the emergency medical service of Duval County, a training program for ambulance attendants was conducted in May. Through the combined efforts of the Trauma Committee, American College of Surgeons, the Duval County Medical Society, and the Duval County Chapter, American Red Cross, a six-hour program was developed and presented to a large number of interested people. The subject matter was based largely upon the recommendations of the College of Surgeons and members of the local medical society. Although the program was short, the interest stimulated was very gratifying and indicated the community's interest in upgrading the training of ambulance attendants.

During 1965 the Florida State Board of Health was invited to participate in a survey of drownings being conducted by Dr. Edward Press, Medical Assistant, Illinois Department of Public Health. Florida and four other states are participating in the study in an effort to provide representative nationwide information. Dr. Press provided the necessary forms which were sent to medical examiners of those counties in which 72 per cent of all drownings occur. In the counties which do not have a medical examiner, the forms were sent to the CHDs. The cooperation by the counties in completing and returning the forms has been very good. No tabulation has been made; this is done by Dr. Press, but when this has been completed it will be utilized in formulating a safety program for the state.

The 1965 Legislature enacted a law which specified minimum equipment for ambulances and certification of ambulance drivers by the particular county health officer. Rules and regulations were prepared to implement this law. The minimum equipment is the same as that recommended by the Trauma Committee of the American College of Surgeons. The American Red Cross is anxious to give the training required to qualify drivers for certification. This law becomes effective July 1, 1966.

Since Red Cross first aid is considered minimum training for ambulance drivers, this program has worked with the Trauma Committee of the American College of Surgeons in developing a course for ambulance attendants which is more advanced than first aid. A manual, developed by the Pennsylvania Department of Public Health, has been approved by the College of Surgeons and 200 copies have been obtained. A guide for use with the manual is being developed. When completed this material will be available to medical societies and interested health officers. Satisfactory completion of this course which may be given in cooperation with the local chapter, American Red Cross, will upgrade the level of training of ambulance attendants throughout the state.

One lack noted in our program has been efforts to reduce the number of accidental deaths among the elderly: in 1964, 826 were recorded in the over-65 age group. Of these, 358 resulted from falls, 238 in homes. Efforts will be directed during the coming year toward reducing the hazards which contributed to these accidents.

Greater emphasis will be placed on in-service training of CHD employees this coming year. A two-day seminar is planned early in the year in Orange County for personnel of that and surrounding CHDs. Although personnel of this office and the Division of Accident Prevention, U. S. Public Health Service, in Washington will assist, emphasis will be placed upon the abilities of local talent in presenting the course. We anticipate that this seminar will be successful and that other health departments will conduct similar courses.

### HEALTH MOBILIZATION PROGRAM

The program was expanded this year to include planning for the management of health resources following a large man-made disaster. By direction of the Governor, 12 major state agencies, including the Florida State Board of Health (SBH), were assigned responsibilities in this field.

The SBH completed its final draft of the Health Annex to the Florida Plan for Emergency Management of Resources by midyear. This annex has been approved at the state, regional, and national levels of the Office of Emergency Planning, and is final. A state level test was conducted on January 28, 1966.

Interest in all phases of health mobilization training increased during the year. Several new publications pertaining to the operation of the Packaged Disaster Hospital (PDH) were issued by the U. S. Public Health Service (USPHS), and these booklets were quickly put to use in ongoing training efforts at both state and county levels.

An in-depth study of possible improvements in training and educational methodology was instituted as a joint effort by the SBH, USPHS, Regional Red Cross, State Civil Defense Agency (CD) and the counties of Escambia, Bay and Leon. The results of this study will be published as soon as possible.

Considerable training in the use of PDHs was accomplished during the year. The SBH was instrumental in negotiating a contract between the USPHS and the Florida Institute for Continuing University Studies for six two-day courses, each in a separate city, on the operation of PDHs. This was a pilot study and the results are now under consideration at the national level to determine its feasibility as a nation-wide program. Some 350 persons received training under this program.

The PDH Training Center in Pinellas County conducted two courses early in the year. There were about 40 trainees in these courses. Classes have been suspended, however, pending a decision at the federal level on whether to continue the FICUS training program.

The hospital storage consultant took advantage of the federal inspections to conduct numerous orientation courses in connection with the PHD inspections, to show the film, "Hospitals for Disaster," and discuss the units in general terms. Approximately 250 persons attended these sessions.

A contract between the SBH and USPHS was negotiated late in the year for the federal agency to fund the travel and salary of an additional employee on the health mobilization staff to work exclusively with the Medical Self-Help Program (MSH). On the arrival of this additional employee, the present incumbent will be re-designated as training officer and will devote the major portion of his time to PDH training. The USPHS has assigned to the SBH an exhibit type trailer to facilitate PDH training in conjunction with the existing Emergency Hospital Training Unit.

Federal PDH inspection teams entered the state in August, 1965 and will be here until September, 1966. They have instituted a program of complete rehabilitation of every PDH in the state on a three year schedule, and it is anticipated that by 1970 each one will be in first class condition and ready to operate at a moment's notice. Only two deficiencies were found in those examined. These have been corrected.

The state now has 54 PDHs with plans to reach 60 by mid-1966. It is not believed, at this time, that the state will be able to utilize more than 60 units. The SBH accepted custodial responsibility for all pre-positioned PDHs and one of the two training PDHs.

Approximately 42,000 people completed MSH training in Florida this year. For three months, our state ranked among the top ten states in the nation in the number of medical self-help graduates for the month.

## DIVISION OF NUTRITION

L. L. PARKS, M.D., Acting Director
(Through October)
MILDRED KAUFMAN, M.S., Director

This division is responsible for planning and providing for nutrition and dietary consultation services as a vital and integral part of the state and county health programs. The goal is to improve the eating habits of Florida's citizens, help them meet their nutritional requirements during health or disease and contribute to their highest possible level of health and well-being. Although the objective is to offer services to individuals of all ages and socioeconomic groups, limited staff and the framework of existing public health programs focus primary emphasis for services on pregnant women; infants, preschool and school age children; the chronically ill; the aged; and persons who are economically, socially and culturally deprived.

Handicapped for most of 1965 by lack of a full-time director, full-time training coordinator and one regional nutrition consultant, the existing staff made notable accomplishments in carrying out ongoing services and implementing objectives as stated in the Annual Report for 1964. Reclassification of the series of nutrition consultant positions and implementation of the new salary scale which began in July, 1965, should help improve the recruitment potential for qualified public health nutritionists. A full-time director for the division assumed her duties in October and is being oriented to the state and its nutrition program. Active recruitment for the vacant positions continues as a high priority.

During the year the nutrition program was carried out by the institutional nutrition consultant, three regional nutrition consultants, full-time nutritionists in Dade and Hillsborough Counties, one nutritionist shared by Highlands, Hendry and Glades Counties under a Rural Demonstration Project, a Migrant Health Project nutritionist in Palm Beach County, a nutritionist with the Maternity and Infant Care Project in Dade County and two nutrition trainees. Nutrition services are offered through the county health departments (CHD) in response to needs for these services identified by the county health officers and their staffs.

In 1965 nutritionists provided service in 54 counties through 385 group or individual conferences held with CHD personnel. These conferences included those for in-service education as well as for planning on behalf of specific patients and for program planning and evaluation. In-service education programs and conferences with county health officers, public health nurses and other staff covered such topics as maternal and child nutrition, weight control, inborn errors of metabolism, therapeutic diets prescribed for various chronic diseases and use of commodity foods in planning meals for eligible low income families.

At the request of CHDs, nutritionists have provided authoritative nutrition information, teaching materials and consultation on ways to meet specific food requirements appropriately in schools, "Headstart" programs, day care centers, small hospitals and nursing homes. During regularly scheduled visits to counties, nutritionists have also given individual and group diet counseling services to patients in maternity clinics and well-child conferences, crippled children's, dental, diabetes and heart clinics. In addition to clinic conferences, through home visits they have provided dietary guidance to mothers of children with phenylketonuria and patients with other chronic diseases requiring diet therapy. To extend nutrition services, cooperative planning and guidance were given to other local workers such as teachers, school lunch personnel, county home economics agents, dietitians and food service supervisors.

This year the position for a nutrition consultant previously established in the Statewide Migrant Health Project was filled by arranging to provide service equivalent to that of one full-time nutrition consultant. The regional nutrition consultant for the southwest area will serve part-time as nutrition coordinator for the Migrant Health Project; during the peak season for farm workers in Florida nutrition trainees will be assigned to counties with a large concentration of migrant population. Regional nutritionists will also participate in working with migrant health in counties in their assigned areas.

In 1965 the institutional nutrition consultant made 55 visits to 44 nursing homes and 36 visits to 21 small hospitals in 26 counties with regional and county nutritionists providing consultation to small institutions in seven other counties.

With the impetus of new federal and state standards requiring employment of better qualified food service personnel, current emphasis is on training programs for food service workers. To initiate a standardized and comprehensive training program, the institutional nutrition consultant has served as state coordinator for the Food Service Supervisor's Correspondence Course developed by the American Dietetic Association. Currently 11 students from hospitals and two from nursing homes are enrolled in the course in Florida. As an outgrowth of this training, St. Petersburg Junior College has developed curriculum for a food service supervisor course to be undertaken during 1966. It is anticipated that similar courses will be offered through the junior colleges, adult education centers or vocational schools in other parts of the state.

At the request of the Florida Dietetic Association (FDA), an institutional nutrition consultant served as an advisor in organizing a Florida Chapter of the Hospital, Institution and Education Food Service Society, an organization for trained food service supervisors. To improve work efficiency and sanitation practices for preparing and serving food in newly constructed hospitals and nursing homes, the institutional nutrition consultant has been asked more frequently to review and make recommendations on proposed building plans submitted to the State Board of Health and CHD staffs. A system for routine referral is being established. Work is also being done on a kitchen planning guide for potential builders of nursing homes. Since present Florida rules and regulations for hospital licensure do not now cover hospital dietary services, the institutional nutrition consultant is writing a new section to cover the food services.

In mid-1965 three nutritionists completed the first one year on the job training program for public health nutritionists. One is regional nutrition consultant in the northwest area, one is nutritionist in Hillsborough County and another is placed with the Rural Demonstration Project in Highlands, Hendry and Glades. Two trainees employed in June and October, 1965, are recent college graduates with major work in food and nutrition. They are assigned to observe and participate in public health nutrition services under the guidance of county and regional nutrition consultants. The scope of the training covers all of the aspects of the program described above and orientation to the many cooperating community agencies.

During the year, staff of the division prepared five issues of "Nutrition in a Nutshell" which discusses current topics in nutrition and is distributed to 663 health workers in the state. With the staff of the Division of Health Education material was provided for two radio spot announcements on weight control. The "Food Service Guide for Child Care Centers" was revised, reprinted and distributed to CHDs.

The regional nutrition consultant in the northwest area and more recently the director of the division met periodically with representatives of the State School Lunch Program and the nutrition specialists of the Agricultural Extension Service to coordinate nutrition activities. This year with a Public Health Service Short Term Training Grant, these cooperating agencies planned and cosponsored a five day program on "Nutrition: Today and Tomorrow in Your Community." Nutritionists, dietitians, home economists, school lunch workers and others from all over the state attended the workshop at the Florida Institute for Continuing University Studies in St. Petersburg. This workshop has provided impetus this year for organization and stimulated activity of local nutrition committees in 18 counties. As mentioned in plans cited in the 1964 Annual Report, early in 1965 two, one day institutes on dietary aspects of mental retardation programs were conducted in Tampa and Miami.

The immediate objective of the division for the coming year is strengthening the program to meet needs for a well prepared staff of public health nutritionists. With new responsibilities to the state Migrant Health Project the challenge will be to determine how nutrition services can be offered to migrant agricultural workers in the most meaningful and realistic way. With many new public health programs developing in maternity and infant care, for preschool and school age children and for the chronically ill and the aged, the nutrition component needs to be identified and adequate plans made for providing the needed services. In addition to considering needs for expanding the staff of qualified public health nutritionists available for service to state and county public health department programs, there is need to cooperate with the professional organizations such as the FDA and Florida Home Economics Association to identify and train nutrition personnel for part-time work in the new community health programs and to provide consultation to small institutions.

## DIVISION OF SANITATION

A. W. MORRISON, Jr., R.S.
Director

The program of this division continues to center on the progressive development and modification of local environmental health services. Activities are designed to assist county health departments (CHD) effectively to meet the escalating needs of Florida's residents and visitors.

A staff consisting of the director and six professional sanitarians gives primary attention to provision of readily available consultation services for each of the counties. Additional responsibilities include the recruitment and training of CHD sanitarians, administration of specific environmental health programs and food research activities. Contacts with other local, state and federal agencies are maintained in areas of mutual interest and responsibility.

### Consultation Services

Staff members made 341 visits to the CHDs during 1965. Assistance was provided to county health officers and sanitarians in all areas of environmental health. Complete program reviews were conducted in several counties and specific programs were studied in a number of others. Program evaluations resulted in major reorganization in two counties. Sanitation consultants continued to assist in coordinating other State Board of Health (SBH) programs in the counties. They participated in the summer teacher training project at the University of Florida, Florida State University, University of South Florida and Bethune-Cookman College. Other consultant activities included serving as members of the State Civil Defense disaster survey teams following a hurricane in south Florida and working with State Department of Education personnel in revising the joint agency bulletin on school lunchroom sanitation and safety. Consultants also served as examination panelists on all Florida Merit System oral boards for entry-grade sanitarian applicants.

### Training

The entire professional staff is involved in training activities. Consultants assist in planning and conducting training courses for CHD staff members, professional organizations and various worker groups in addition to participating in the SBH sanitarian in-service training program. This program provides basic and advanced level training in environmental health. Two 12-week general sanitation courses and a one-week topical course were offered in 1965. The 12-week courses provide comprehensive classroom and laboratory coverage of environmental health with a four-week internship in selected CHDs. Sixteen sanitarians successfully completed this course: four from Dade; two each from Alachua, Orange, Palm Beach and Pinellas; and one each from Duval, Leon, Sarasota and Seminole. The topical course on effective communications was held in Jacksonville with 23 sanitarians from 18 counties attending.

A short-term training grant was obtained from U. S. Public Health Service (USPHS) to initiate a program on Urban Planning for Environmental Health during the year. This program, co-sponsored by the U of F, consisted of a two-week training course in Alachua County and a one-week course in Brevard County. The courses were designed for professional planners, consulting engineers, municipal and county officials, civic leaders and the several professional public health disciplines. Each included a community survey by the student body with a printed report of findings and recommendations for solving existing problems and preventing environmental health problems of the future. A total of 111 persons, 103 from 26 Florida counties and eight from out-of-state, attended these courses.

Food-worker training programs were conducted in 14 counties (Alachua, Brevard, Broward, Charlotte, Dade, Duval, Escambia, Highlands, Hillsborough, Orange, Pinellas, Polk, Putnam and Sarasota) with a combined total of 4542 persons completing courses. Dade and Escambia operate continuous programs. The other listed counties have conducted one or more courses.

During the last quarter of the year, the division coordinated enrollment of 150 CHD and SBH personnel in recently developed Communicable Disease Center home study courses for sanitarians. The three present offerings are in the areas of mathematics, insect and vector control and communicable disease control. It is planned that new courses will be added periodically.

### Program Administration

The division is responsible in whole or part for administration of 16 statewide environmental health program areas, five of which include legal requirement for SBH license or operating permit: trailer parks, food processing plants, camps, bottled water plants and rendering plants; and another which involves official recommendations to the USPHS for required federal certification. Field activities associated with these programs are conducted by CHD sanitarians. Staff consultants provide technical assistance to the counties in all environmental health program areas.

### Trailer Parks

The 2413 permitted trailer parks, ranging in size from two spaces to more than 1000, provided 104,694 trailer coach spaces at the close of 1965. This represents a net increase of 111 parks and 5675 spaces for the year. Park quality characteristics continue to improve as evidenced by an increasing ratio of those with utilities to those served by central bath houses, lesser percentages of new spaces served by septic tanks and an increasing rate of spaces served by municipal and other central sewage systems. Currently, 57 per cent of the total spaces are served by municipal water and 40 per cent by municipal or other central sewerage systems. The division's 350 permit transactions for the year included: 135 new parks, 24 parks closed, 91 park expansions and 100 changes in ownership, park name or reduction in number of spaces. CHD sanitarians made 9519 visits to the trailer parks during 1965 in order to insure compliance with sanitation standards and maintenance of satisfactory conditions.

### Food Processing Plants

Operating permits were issued to 733 plants in 43 counties representing an increase of 77 plants in 1965. Food technology continues to advance at a rapid rate spurred on by consumer demand for convenience foods including ready-to-eat varieties. New food mixtures, changing processes, food packaging and several factors associated with the storage and transportation of food products present challenging public health problems. CHD sanitarians made 5374 visits to the food processing plants during the year to insure sanitary conditions and operations.

### Camps

A total of 368 camps with facilities for the housing of 48,078 persons was licensed during the year. This represents an increase of 67 camps and 7005 facilities compared to 1964. The 318 migrant labor camps provided space for 41,861 persons and 50 recreational camps had a combined capacity of 6217. CHD sanitarians continued their extensive efforts to upgrade the camps which again resulted in the abandonment or renovation of a number of old camps and the construction of new facilities. Sanitarians made 4776 visits to the camps in 1965 in order to effect physical improvements and insure proper operational procedures during periods of occupancy.

**Bottled Water Plants**

Operational permits were issued to 30 Florida plants and four out-of-state bottled water shippers in 1965. This represents an increase of three Florida plants. Improvements are continuing in the older plants as CHD sanitarians again increased activities in this field. A total of 471 visits was made to the plants and all bottled waters were regularly sampled for laboratory examination.

**Rendering Plants**

Operating permits were issued to 12 rendering plants in eight counties. Studies indicate the continued presence of salmonella organisms in these plants and in the finished products which are utilized in animal feeds. Findings have led to recommendations involving plant layout and operating procedures in order to prevent contamination of the products. Sanitarians maintain close surveillance of the plants to insure that satisfactory cleaning practices are carried out, waste products are properly handled and odors are held to minimum levels.

**Common Carriers**

The division continued cooperative agreements with the USPHS in connection with the Federal Interstate Carrier Certification Program. This includes water and food placed aboard aircrafts, steamships, railroad trains and buses and the handling and disposal of liquid and solid wastes from these commercial carriers. CHD sanitarians made periodic surveys of these operations and facilities with reports to this division. These reports serve as a basis for the division's semi-annual recommendations to the USPHS. The 124 facilities recommended for approved status in 1965 include: 28 airline catering and watering points, 14 airline servicing areas, five railroad commissaries and catering points, 17 railroad watering points and 60 vessel watering points. Staff consultants and USPHS personnel provide assistance to the counties in this program.

**Food Hygiene**

Major food hygiene activity directed toward the prevention and control of food-borne illness and disease has again emphasized improvement in practices involving the preparation, storage and handling of potentially hazardous foods. Prompt attention is given and careful investigation is made of all reported food outbreaks. Staff consultants along with epidemiologists, other personnel, and all necessary laboratory facilities are readily available to assist the CHDs in these investigations. All counties are involved in this program which included the recording of 31,070 food establishments of several types: eating and drinking (food service) — 21,002; food processing — 1010; abattoirs — 166; shellfish and crustacea — 205; grocery and meat markets (food outlets) — 715; others — 1530. CHD sanitarians made 177,226 visits to the food establishments in 1965.

**Other Programs**

The CHDs conducted a number of additional environmental health activities involving: water supplies, liquid and solid waste disposal, school sanitation, housing, swimming pools, nuisance control, rabies control, hospitals and nursing homes, child care centers, recreational areas and other facilities (for further details see Table 18, Major Activities of Local Health Units).

### Bottled Water Plants

Operational permits were issued to 30 Florida plants and four out-of-state bottled water shippers in 1965. This represents an increase of three Florida plants. Improvements are continuing in the older plants as CHD sanitarians again increased activities in this field. A total of 471 visits was made to the plants and all bottled waters were regularly sampled for laboratory examination.

### Rendering Plants

Operating permits were issued to 12 rendering plants in eight counties. Studies indicate the continued presence of salmonella organisms in these plants and in the finished products which are utilized in animal feeds. Findings have led to recommendations involving plant layout and operating procedures in order to prevent contamination of the products. Sanitarians maintain close surveillance of the plants to insure that satisfactory cleaning practices are carried out, waste products are properly handled and odors are held to minimum levels.

### Common Carriers

The division continued cooperative agreements with the USPHS in connection with the Federal Interstate Carrier Certification Program. This includes water and food placed aboard aircrafts, steamships, railroad trains and buses and the handling and disposal of liquid and solid wastes from these commercial carriers. CHD sanitarians made periodic surveys of these operations and facilities with reports to this division. These reports serve as a basis for the division's semi-annual recommendations to the USPHS. The 124 facilities recommended for approved status in 1965 include: 28 airline catering and watering points, 14 airline servicing areas, five railroad commissaries and catering points, 17 railroad watering points and 60 vessel watering points. Staff consultants and USPHS personnel provide assistance to the counties in this program.

### Food Hygiene

Major food hygiene activity directed toward the prevention and control of food-borne illness and disease has again emphasized improvement in practices involving the preparation, storage and handling of potentially hazardous foods. Prompt attention is given and careful investigation is made of all reported food outbreaks. Staff consultants along with epidemiologists, other personnel, and all necessary laboratory facilities are readily available to assist the CHDs in these investigations. All counties are involved in this program which included the recording of 31,070 food establishments of several types: eating and drinking (food service) — 21,002; food processing — 1010; abattoirs — 166; shellfish and

crustacea — 205; grocery and meat markets (food outlets) — 715; others — 1530. CHD sanitarians made 177,226 visits to the food establishments in 1965.

### Other Programs

The CHDs conducted a number of additional environmental health activities involving: water supplies, liquid and solid waste disposal, school sanitation, housing, swimming pools, nuisance control, rabies control, hospitals and nursing homes, child care centers, recreational areas and other facilities (for further details see Table 18, Major Activities of Local Health Units).

## TABLE 17

## PERMITTED ESTABLISHMENTS AND FACILITIES, FLORIDA, 1965

| County | Trailer Parks | Food Processing Plants | Camps | Bottled Water Plants | Rendering Plants |
|---|---|---|---|---|---|
| Alachua | 41 | 28 | 1 | 1 | .... |
| Baker | 4 | .... | .... | .... | .... |
| Bay | 52 | 4 | 2 | .... | .... |
| Bradford | .... | .... | .... | .... | .... |
| Brevard | 86 | 4 | 5 | .... | .... |
| Broward | 122 | 36 | 8 | 1 | 1 |
| Calhoun | 2 | .... | .... | .... | .... |
| Charlotte | 24 | 9 | .... | .... | .... |
| Citrus | .... | .... | 1 | .... | .... |
| Clay | 15 | .... | 7 | .... | 1 |
| Collier | 25 | 2 | 84 | .... | .... |
| Columbia | 6 | .... | .... | .... | .... |
| Dade | 103 | 98 | 39 | 4 | 4 |
| DeSoto | .... | 4 | .... | .... | .... |
| Dixie | 6 | 2 | 1 | .... | .... |
| Duval | 79 | 31 | 1 | 1 | .... |
| Escambia | 90 | 31 | 2 | .... | .... |
| Flagler | 11 | .... | .... | .... | .... |
| Franklin | 7 | 2 | .... | .... | .... |
| Gadsden | 8 | 1 | .... | .... | 1 |
| Gilchrist | .... | .... | .... | .... | .... |
| Glades | 5 | .... | 4 | .... | .... |
| Gulf | 6 | .... | .... | .... | .... |
| Hamilton | 8 | .... | .... | .... | .... |
| Hardee | 3 | .... | .... | .... | .... |
| Hendry | 6 | .... | 6 | .... | .... |
| Hernando | 3 | 2 | .... | .... | .... |
| Highlands | 12 | .... | .... | .... | .... |
| Hillsborough | 173 | 70 | .... | 1 | 2 |
| Holmes | .... | 1 | .... | .... | .... |
| Indian River | 21 | 1 | .... | 1 | .... |
| Jackson | 8 | 4 | 2 | .... | 1 |
| Jefferson | 2 | .... | .... | .... | .... |
| Lafayette | .... | .... | .... | .... | .... |
| Lake | 45 | 2 | .... | .... | .... |
| Lee | 77 | 20 | 4 | 1 | .... |
| Leon | 56 | 5 | 2 | 1 | .... |
| Levy | 8 | .... | .... | .... | .... |
| Liberty | .... | .... | .... | .... | .... |
| Madison | 2 | .... | .... | .... | .... |
| Manatee | 75 | 35 | 10 | 3 | .... |
| Marion | 32 | 1 | 1 | .... | .... |
| Martin | 30 | 5 | .... | 1 | .... |
| Monroe | 58 | .... | .... | .... | .... |
| Nassau | 9 | 2 | .... | .... | .... |
| Okaloosa | 53 | 2 | .... | .... | .... |
| Okeechobee | 23 | .... | .... | .... | .... |
| Orange | 119 | 56 | 8 | 1 | .... |
| Osceola | 18 | 2 | .... | 1 | .... |
| Palm Beach | 118 | 20 | 91 | 4 | .... |
| Pasco | 60 | 6 | 10 | 1 | .... |
| Pinellas | 277 | 63 | 2 | 2 | .... |
| Polk | 121 | 54 | 22 | .... | .... |
| Putnam | 36 | 4 | 5 | .... | .... |
| St. Johns | 18 | 8 | .... | .... | .... |
| St. Lucie | 29 | 11 | 4 | 1 | .... |
| Santa Rosa | 19 | .... | .... | .... | .... |
| Sarasota | 77 | 49 | 3 | 3 | .... |
| Seminole | 4 | 13 | .... | .... | 1 |
| Sumter | 10 | .... | .... | .... | .... |
| Suwannee | 4 | 1 | .... | .... | .... |
| Taylor | 6 | 1 | .... | .... | .... |
| Union | .... | .... | 1 | .... | .... |
| Volusia | 93 | 37 | 8 | 2 | 1 |
| Wakulla | 1 | 1 | .... | .... | .... |
| Walton | 4 | 1 | 2 | .... | .... |
| Washington | 2 | 4 | .... | .... | .... |
| Out-of-state | .... | .... | .... | 4 | .... |
| TOTAL | 2413 | 733 | 368 | 34 | 12 |

## TABLE 18

## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | A. COMMUNICABLE DISEASE CONTROL | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Immunizations Completed | | | | | | | | |
| | Admissions to Service | Field and Office Visits | Treatment for Parasites | Smallpox | Diphtheria | Whooping Cough | Tetanus | Poliomyelitis Injected | Poliomyelitis Oral | Typhoid | Rabies—Humans | Rabies—Animals |
| | 1 | 2-3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Total 1965 | 5429 | 10676 | 45742 | 98828 | 174464 | 94452 | 216528 | 2617 | 134170 | 83131 | 119 | 78019 |
| Alachua | 48 | 99 | 1827 | 2411 | 3591 | 2740 | 5548 | 0 | 5332 | 737 | 0 | 3378 |
| Baker | 5 | 7 | 352 | 556 | 825 | 494 | 1123 | 1 | 344 | 646 | 0 | 132 |
| Bay | 24 | 35 | 229 | 1410 | 2036 | 1767 | 4340 | 0 | 1373 | 7180 | 0 | 0 |
| Bradford | 23 | 32 | 201 | 207 | 607 | 316 | 747 | 0 | 234 | 429 | 0 | 0 |
| Brevard | 229 | 374 | 280 | 1991 | 2945 | 1570 | 3012 | 19 | 927 | 275 | 11 | 2 |
| Broward | 275 | 660 | 4655 | 4672 | 10275 | 4319 | 9983 | 80 | 4284 | 378 | 0 | 0 |
| Calhoun | 0 | 0 | 370 | 454 | 451 | 405 | 920 | 0 | 155 | 751 | 0 | 0 |
| Charlotte | 8 | 43 | 76 | 218 | 417 | 278 | 477 | 19 | 425 | 79 | 0 | 0 |
| Citrus | 4 | 4 | 61 | 291 | 651 | 334 | 716 | 0 | 1382 | 301 | 0 | 0 |
| Clay | 69 | 156 | 114 | 332 | 334 | 215 | 538 | 0 | 92 | 19 | 0 | 433 |
| Collier | 24 | 49 | 753 | 276 | 940 | 545 | 974 | 0 | 633 | 128 | 3 | 1675 |
| Columbia | 0 | 0 | 130 | 1568 | 3368 | 2308 | 4769 | 0 | 391 | 4243 | 0 | 0 |
| Dade | 742 | 2901 | 281 | 16007 | 24194 | 13599 | 33167 | 520 | 16272 | 6946 | 1 | 0 |
| DeSoto | 33 | 57 | 216 | 270 | 622 | 331 | 681 | 0 | 706 | 8 | 1 | 0 |
| Dixie | 17 | 22 | 236 | 161 | 403 | 269 | 574 | 0 | 330 | 352 | 0 | 0 |
| Duval | 56 | 90 | 33 | 1352 | 4010 | 2911 | 4815 | 0 | 6232 | 280 | 27 | 0 |
| Escambia | 42 | 194 | 1857 | 7555 | 12885 | 6340 | 16597 | 0 | 9036 | 8667 | 7 | 7637 |
| Flagler | 0 | 0 | 293 | 214 | 368 | 208 | 486 | 0 | 111 | 17 | 0 | 0 |
| Franklin | 10 | 13 | 432 | 144 | 331 | 311 | 522 | 0 | 320 | 156 | 0 | 0 |
| Gadsden | 61 | 93 | 5582 | 4470 | 3438 | 1306 | 5855 | 0 | 1821 | 3816 | 2 | 0 |
| Gilchrist | 28 | 47 | 631 | 146 | 345 | 268 | 762 | 0 | 922 | 508 | 2 | 0 |
| Glades | 53 | 66 | 88 | 235 | 431 | 225 | 446 | 0 | 292 | 338 | 0 | 0 |
| Gulf | 0 | 0 | 1046 | 469 | 1022 | 751 | 1633 | 0 | 1444 | 1570 | 0 | 0 |
| Hamilton | 1 | 2 | 134 | 120 | 447 | 315 | 567 | 0 | 691 | 52 | 0 | 163 |
| Hardee | 2 | 2 | 202 | 163 | 665 | 297 | 714 | 0 | 730 | 21 | 0 | 0 |
| Hendry | 197 | 240 | 147 | 507 | 1230 | 436 | 1266 | 0 | 706 | 818 | 0 | 0 |
| Hernando | 13 | 13 | 381 | 289 | 570 | 171 | 1042 | 0 | 1303 | 5 | 0 | 0 |
| Highlands | 26 | 118 | 101 | 1418 | 1288 | 513 | 1292 | 0 | 1402 | 508 | 0 | 0 |
| Hillsborough | 1684 | 2065 | 1995 | 10261 | 17577 | 8216 | 19121 | 1 | 16263 | 532 | 13 | 34900 |
| Holmes | 4 | 4 | 779 | 406 | 786 | 372 | 872 | 0 | 296 | 568 | 1 | 1 |
| Indian River | 1 | 6 | 287 | 531 | 783 | 494 | 989 | 0 | 580 | 593 | 0 | 0 |
| Jackson | 19 | 22 | 904 | 1732 | 2306 | 924 | 3779 | 28 | 594 | 2755 | 0 | 0 |
| Jefferson | 0 | 0 | 349 | 1279 | 688 | 514 | 1794 | 0 | 1066 | 1304 | 0 | 211 |
| Lafayette | 15 | 15 | 146 | 38 | 96 | 71 | 198 | 0 | 36 | 660 | 0 | 0 |
| Lake | 30 | 79 | 112 | 275 | 1071 | 724 | 1072 | 4 | 1015 | 9 | 0 | 0 |
| Lee | 7 | 9 | 301 | 1617 | 2884 | 1249 | 3580 | 0 | 1951 | 4470 | 0 | 0 |
| Leon | 10 | 23 | 152 | 1997 | 2452 | 1194 | 3601 | 0 | 937 | 2463 | 0 | 0 |
| Levy | 19 | 30 | 351 | 227 | 751 | 295 | 818 | 0 | 160 | 394 | 0 | 0 |
| Liberty | 5 | 5 | 332 | 221 | 281 | 145 | 686 | 0 | 162 | 503 | 0 | 0 |
| Madison | 0 | 0 | 613 | 469 | 476 | 377 | 680 | 1 | 280 | 327 | 0 | 0 |
| Manatee | 135 | 151 | 107 | 283 | 594 | 471 | 920 | 0 | 436 | 63 | 3 | 5942 |
| Marion | 102 | 128 | 1252 | 2030 | 4787 | 1627 | 5510 | 0 | 1938 | 4690 | 3 | 0 |
| Martin | 3 | 3 | 447 | 790 | 1346 | 396 | 1367 | 0 | 1323 | 785 | 0 | 0 |
| Monroe | 175 | 185 | 2 | 1329 | 1651 | 545 | 2031 | 0 | 1795 | 1825 | 0 | 0 |
| Nassau | 65 | 120 | 1129 | 1482 | 1515 | 751 | 2836 | 0 | 976 | 4577 | 0 | 356 |
| Okaloosa | 88 | 114 | 321 | 788 | 3430 | 2199 | 4088 | 0 | 4461 | 1497 | 0 | 0 |
| Okeechobee | 0 | 0 | 13 | 52 | 529 | 205 | 539 | 0 | 261 | 21 | 0 | 0 |
| Orange | 114 | 285 | 463 | 3858 | 9117 | 5041 | 9604 | 0 | 6106 | 5029 | 0 | 3629 |
| Osceola | 3 | 4 | 143 | 265 | 790 | 497 | 790 | 9 | 421 | 468 | 0 | 0 |
| Palm Beach | 470 | 1140 | 1095 | 4370 | 8274 | 4827 | 8769 | 0 | 4599 | 446 | 0 | 0 |
| Pasco | 15 | 23 | 1594 | 884 | 1552 | 625 | 1552 | 0 | 1930 | 73 | 1 | 0 |
| Pinellas | 34 | 79 | 132 | 2743 | 5862 | 4468 | 6421 | 1743 | 3374 | 241 | 0 | 25 |
| Polk | 197 | 397 | 1053 | 5142 | 10708 | 6152 | 12404 | 0 | 11558 | 267 | 39 | 10683 |
| Putnam | 98 | 98 | 659 | 917 | 1313 | 533 | 1738 | 0 | 733 | 31 | 0 | 0 |
| St. Johns | 32 | 100 | 213 | 989 | 2199 | 531 | 2191 | 6 | 2766 | 2305 | 3 | 0 |
| St. Lucie | 3 | 8 | 18 | 545 | 1009 | 439 | 1278 | 0 | 668 | 26 | 0 | 0 |
| Santa Rosa | 2 | 2 | 367 | 1171 | 1762 | 1125 | 1917 | 0 | 967 | 921 | 0 | 0 |
| Sarasota | 61 | 170 | 149 | 515 | 1094 | 783 | 1128 | 0 | 668 | 42 | 0 | 8168 |
| Seminole | 9 | 16 | 6384 | 1012 | 1881 | 1269 | 2381 | 0 | 2112 | 1453 | 0 | 0 |
| Sumter | 18 | 44 | 813 | 543 | 999 | 631 | 1023 | 0 | 654 | 522 | 0 | 0 |
| Suwannee | 2 | 2 | 728 | 179 | 502 | 399 | 1270 | 2 | 682 | 1049 | 0 | 0 |
| Taylor | 2 | 2 | 314 | 575 | 1254 | 693 | 1649 | 0 | 1259 | 411 | 0 | 332 |
| Union | 4 | 4 | 84 | 106 | 197 | 142 | 233 | 0 | 0 | 145 | 0 | 1 |
| Volusia | 13 | 26 | 348 | 466 | 803 | 723 | 960 | 177 | 514 | 111 | 1 | 0 |
| Wakulla | 0 | 0 | 101 | 103 | 247 | 228 | 803 | 7 | 1201 | 600 | 1 | 264 |
| Walton | 0 | 0 | 360 | 316 | 880 | 522 | 885 | 0 | 295 | 514 | 0 | 0 |
| Washington | 0 | 0 | 424 | 416 | 1329 | 513 | 1485 | 0 | 1243 | 1213 | 0 | 87 |

## TABLE 18 (Continued)
## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | B. VENEREAL DISEASE CONTROL | | | | | |
|---|---|---|---|---|---|---|
| | Admissions to Service 1 | Diagnosis 2 | Patients Interviewed 3 | Number of Contacts Named 4 | Field Visits 5 | Office Visits 6 |
| Total 1965 | 42304 | 14448 | 9013 | 15193 | 48278 | 87884 |
| Alachua | 359 | 55 | 59 | 135 | 450 | 372 |
| Baker | 7 | 3 | 3 | 3 | 5 | 13 |
| Bay | 166 | 96 | 54 | 90 | 123 | 209 |
| Bradford | 46 | 33 | 25 | 48 | 107 | 67 |
| Brevard | 525 | 238 | 336 | 648 | 2672 | 389 |
| Broward | 1500 | 738 | 1056 | 1067 | 4466 | 2813 |
| Calhoun | 13 | 6 | 9 | 1 | 3 | 18 |
| Charlotte | 5 | 2 | 2 | 9 | 16 | 13 |
| Citrus | 4 | 3 | 4 | 3 | 1 | 3 |
| Clay | 19 | 5 | 5 | 5 | 13 | 34 |
| Collier | 184 | 104 | 100 | 102 | 401 | 230 |
| Columbia | 98 | 65 | 41 | 31 | 244 | 150 |
| Dade | 10514 | 2959 | 2009 | 3463 | 13774 | 44786 |
| DeSoto | 46 | 6 | 44 | 44 | 142 | 55 |
| Dixie | 21 | 17 | 19 | 45 | 38 | 14 |
| Duval | 12194 | 1296 | 568 | 1184 | 6008 | 12744 |
| Escambia | 2475 | 1599 | 87 | 436 | 1079 | 2870 |
| Flagler | 13 | 12 | 10 | 17 | 17 | 19 |
| Franklin | 5 | 5 | 5 | 2 | 4 | 10 |
| Gadsden | 583 | 180 | 174 | 415 | 911 | 812 |
| Gilchrist | 14 | 10 | 19 | 26 | 14 | 26 |
| Glades | 9 | 9 | 8 | 1 | 5 | 13 |
| Gulf | 12 | 1 | 0 | 0 | 11 | 19 |
| Hamilton | 25 | 22 | 5 | 1 | 19 | 32 |
| Hardee | 17 | 2 | 2 | 23 | 23 | 16 |
| Hendry | 55 | 14 | 17 | 24 | 58 | 58 |
| Hernando | 7 | 7 | 3 | 4 | 9 | 18 |
| Highlands | 92 | 13 | 43 | 39 | 56 | 142 |
| Hillsborough | 3619 | 1644 | 581 | 1095 | 2149 | 8686 |
| Holmes | 17 | 8 | 17 | 24 | 1 | 24 |
| Indian River | 291 | 244 | 277 | 255 | 158 | 346 |
| Jackson | 73 | 66 | 56 | 72 | 109 | 100 |
| Jefferson | 54 | 27 | 14 | 16 | 63 | 66 |
| Lafayette | 21 | 20 | 0 | 0 | 0 | 34 |
| Lake | 48 | 30 | 22 | 122 | 165 | 34 |
| Lee | 324 | 198 | 201 | 171 | 1285 | 627 |
| Leon | 1090 | 790 | 68 | 102 | 542 | 1423 |
| Levy | 26 | 16 | 15 | 20 | 8 | 27 |
| Liberty | 8 | 3 | 7 | 5 | 3 | 8 |
| Madison | 30 | 21 | 21 | 24 | 58 | 48 |
| Manatee | 472 | 247 | 291 | 183 | 415 | 595 |
| Marion | 697 | 284 | 228 | 482 | 618 | 907 |
| Martin | 54 | 49 | 52 | 80 | 223 | 46 |
| Monroe | 206 | 93 | 98 | 84 | 302 | 449 |
| Nassau | 13 | 5 | 5 | 7 | 24 | 13 |
| Okaloosa | 83 | 47 | 50 | 56 | 12 | 99 |
| Okeechobee | 9 | 0 | 1 | 0 | 11 | 22 |
| Orange | 820 | 122 | 216 | 634 | 2680 | 1223 |
| Osceola | 30 | 30 | 30 | 57 | 6 | 112 |
| Palm Beach | 1981 | 1333 | 523 | 1069 | 3438 | 2485 |
| Pasco | 29 | 18 | 30 | 42 | 15 | 32 |
| Pinellas | 863 | 340 | 300 | 445 | 973 | 922 |
| Polk | 737 | 353 | 223 | 602 | 1410 | 926 |
| Putnam | 28 | 19 | 22 | 19 | 36 | 32 |
| St. Johns | 153 | 73 | 89 | 102 | 117 | 339 |
| St. Lucie | 111 | 108 | 124 | 154 | 632 | 146 |
| Santa Rosa | 11 | 10 | 9 | 7 | 7 | 37 |
| Sarasota | 127 | 33 | 55 | 71 | 268 | 214 |
| Seminole | 693 | 300 | 168 | 545 | 532 | 778 |
| Sumter | 73 | 70 | 80 | 111 | 125 | 116 |
| Suwannee | 19 | 14 | 8 | 11 | 11 | 20 |
| Taylor | 142 | 82 | 81 | 122 | 251 | 210 |
| Union | 8 | 3 | 3 | 2 | 9 | 19 |
| Volusia | 305 | 227 | 314 | 526 | 943 | 726 |
| Wakulla | 17 | 10 | 9 | 1 | 4 | 18 |
| Walton | 8 | 8 | 6 | 7 | 2 | 9 |
| Washington | 16 | 3 | 12 | 2 | 4 | 21 |

## TABLE 18 (Continued)
## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | C. TUBERCULOSIS CONTROL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Admissions to Service | | | | | Persons X-Rayed | | | | | |
| | Active Cases 1 | Quiescent Cases 2 | Inactive Cases 3 | Contacts and Suspects 4 | Atypical Cases 5 | Miniature Films 6 | 14" x 17" Films 7 | Tuberculin Tests 8 | Field Visits 9 | Office Visits 10 | Cases Hospitalized 11 |
| Total 1965 | 2318 | 813 | 6265 | 21926 | 533 | 468963 | 54633 | 85686 | 44423 | 65394 | 1693 |
| Alachua | 19 | 7 | 43 | 99 | 3 | 10261 | 469 | 149 | 688 | 125 | 17 |
| Baker | 4 | 0 | 1 | 22 | 0 | 0 | 54 | 17 | 41 | 54 | 3 |
| Bay | 14 | 4 | 67 | 67 | 1 | 0 | 617 | 595 | 146 | 286 | 13 |
| Bradford | 3 | 3 | 17 | 18 | 1 | 2593 | 145 | 194 | 141 | 44 | 1 |
| Brevard | 26 | 15 | 80 | 1551 | 27 | 1 | 2177 | 7584 | 1092 | 1974 | 23 |
| Broward | 128 | 39 | 259 | 1354 | 34 | 61209 | 1348 | 4730 | 3503 | 3032 | 120 |
| Calhoun | 4 | 1 | 18 | 148 | 13 | 1650 | 76 | 402 | 177 | 211 | 7 |
| Charlotte | 8 | 1 | 11 | 92 | 4 | 3060 | 1967 | 561 | 273 | 225 | 6 |
| Citrus | 4 | 3 | 5 | 25 | 3 | 795 | 51 | 20 | 77 | 69 | 2 |
| Clay | 4 | 0 | 28 | 66 | 0 | 3571 | 94 | 74 | 127 | 238 | 2 |
| Collier | 30 | 8 | 53 | 180 | 8 | 7346 | 252 | 1437 | 397 | 274 | 20 |
| Columbia | 4 | 1 | 6 | 45 | 2 | 510 | 42 | 749 | 75 | 169 | 5 |
| Dade | 395 | 52 | 1201 | 5723 | 34 | 62327 | 9981 | 3723 | 5424 | 16826 | 382 |
| DeSoto | 7 | 1 | 8 | 34 | 1 | 0 | 518 | 26 | 184 | 124 | 3 |
| Dixie | 2 | 4 | 4 | 12 | 0 | 0 | 11 | 19 | 24 | 42 | 4 |
| Duval | 101 | 97 | 594 | 517 | 123 | 6338 | 2533 | 904 | 1463 | 2064 | 50 |
| Escambia | 106 | 11 | 255 | 293 | 43 | 15149 | 1243 | 5688 | 2972 | 372 | 100 |
| Flagler | 5 | 1 | 6 | 52 | 0 | 0 | 78 | 506 | 83 | 64 | 3 |
| Franklin | 3 | 2 | 8 | 33 | 1 | 0 | 93 | 17 | 59 | 62 | 5 |
| Gadsden | 12 | 1 | 57 | 193 | 0 | 6349 | 73 | 190 | 296 | 381 | 11 |
| Gilchrist | 4 | 2 | 4 | 18 | 2 | 0 | 42 | 541 | 29 | 28 | 0 |
| Glades | 8 | 4 | 7 | 32 | 0 | 1395 | 65 | 24 | 80 | 77 | 6 |
| Gulf | 3 | 1 | 24 | 58 | 2 | 0 | 493 | 82 | 76 | 161 | 4 |
| Hamilton | 0 | 2 | 16 | 14 | 2 | 351 | 25 | 263 | 71 | 48 | 1 |
| Hardee | 6 | 2 | 15 | 10 | 2 | 1456 | 539 | 6 | 40 | 37 | 4 |
| Hendry | 3 | 4 | 26 | 84 | 2 | 2579 | 257 | 122 | 167 | 203 | 3 |
| Hernando | 4 | 3 | 11 | 18 | 1 | 444 | 19 | 4 | 25 | 55 | 1 |
| Highlands | 23 | 0 | 22 | 113 | 0 | 5290 | 448 | 502 | 266 | 146 | 10 |
| Hillsborough | 416 | 140 | 830 | 3766 | 47 | 66734 | 4913 | 10718 | 8479 | 10648 | 176 |
| Holmes | 3 | 1 | 19 | 124 | 0 | 0 | 123 | 397 | 46 | 309 | 4 |
| Indian River | 19 | 3 | 29 | 35 | 1 | 0 | 390 | 981 | 243 | 60 | 11 |
| Jackson | 24 | 8 | 51 | 196 | 1 | 0 | 314 | 1463 | 185 | 502 | 13 |
| Jefferson | 3 | 2 | 7 | 34 | 0 | 0 | 433 | 254 | 62 | 43 | 4 |
| Lafayette | 4 | 1 | 1 | 11 | 1 | 0 | 0 | 11 | 5 | 35 | 5 |
| Lake | 45 | 16 | 134 | 231 | 18 | 11552 | 446 | 235 | 743 | 447 | 36 |
| Lee | 46 | 11 | 68 | 54 | 5 | 8915 | 650 | 5438 | 274 | 410 | 38 |
| Leon | 15 | 6 | 32 | 223 | 2 | 14435 | 320 | 3507 | 1037 | 283 | 29 |
| Levy | 7 | 2 | 32 | 564 | 1 | 2673 | 63 | 1937 | 367 | 418 | 3 |
| Liberty | 2 | 1 | 6 | 48 | 0 | 354 | 19 | 86 | 91 | 34 | 1 |
| Madison | 8 | 2 | 16 | 41 | 0 | 1858 | 79 | 57 | 76 | 213 | 3 |
| Manatee | 57 | 13 | 73 | 236 | 4 | 7141 | 210 | 263 | 702 | 725 | 26 |
| Marion | 31 | 9 | 40 | 100 | 0 | 4626 | 387 | 1403 | 733 | 181 | 20 |
| Martin | 11 | 2 | 23 | 39 | 0 | 0 | 191 | 746 | 120 | 81 | 10 |
| Monroe | 21 | 7 | 45 | 127 | 2 | 0 | 418 | 1806 | 331 | 309 | 11 |
| Nassau | 9 | 10 | 29 | 125 | 16 | 3926 | 173 | 21 | 413 | 210 | 9 |
| Okaloosa | 10 | 16 | 13 | 16 | 0 | 0 | 3015 | 1233 | 368 | 123 | 6 |
| Okeechobee | 2 | 0 | 8 | 12 | 0 | 0 | 25 | 179 | 29 | 40 | 2 |
| Orange | 90 | 34 | 229 | 733 | 27 | 17419 | 1589 | 1905 | 1623 | 3225 | 41 |
| Osceola | 7 | 3 | 14 | 27 | 2 | 0 | 88 | 72 | 80 | 253 | 9 |
| Palm Beach | 199 | 111 | 410 | 684 | 16 | 61829 | 2498 | 3194 | 2424 | 1762 | 161 |
| Pasco | 11 | 12 | 31 | 269 | 16 | 1375 | 285 | 439 | 455 | 846 | 11 |
| Pinellas | 92 | 19 | 277 | 922 | 0 | 27830 | 2172 | 5236 | 1827 | 8522 | 60 |
| Polk | 89 | 42 | 500 | 1497 | 41 | 29058 | 2502 | 4983 | 3247 | 4987 | 68 |
| Putnam | 18 | 24 | 35 | 77 | 9 | 654 | 622 | 452 | 71 | 297 | 6 |
| St. Johns | 6 | 5 | 11 | 25 | 3 | 1886 | 146 | 1969 | 67 | 60 | 6 |
| St. Lucie | 20 | 0 | 40 | 42 | 0 | 279 | 258 | 89 | 190 | 238 | 22 |
| Santa Rosa | 6 | 1 | 25 | 126 | 1 | 0 | 410 | 732 | 116 | 176 | 4 |
| Sarasota | 24 | 3 | 34 | 72 | 1 | 3596 | 403 | 497 | 492 | 468 | 16 |
| Seminole | 25 | 13 | 87 | 160 | 3 | 0 | 553 | 771 | 377 | 447 | 22 |
| Sumter | 3 | 0 | 20 | 88 | 0 | 1840 | 135 | 311 | 150 | 185 | 2 |
| Suwannee | 9 | 4 | 13 | 28 | 1 | 0 | 95 | 40 | 48 | 143 | 6 |
| Taylor | 5 | 1 | 30 | 43 | 0 | 3479 | 54 | 3426 | 68 | 217 | 10 |
| Union | 1 | 0 | 1 | 15 | 0 | 1006 | 14 | 17 | 10 | 30 | 2 |
| Volusia | 40 | 12 | 82 | 132 | 5 | 2864 | 6721 | 653 | 652 | 599 | 24 |
| Wakulla | 1 | 1 | 4 | 22 | 0 | 338 | 3 | 10 | 35 | 7 | 0 |
| Walton | 6 | 2 | 39 | 95 | 0 | 622 | 172 | 801 | 90 | 210 | 5 |
| Washington | 3 | 7 | 81 | 16 | 1 | 0 | 34 | 225 | 101 | 260 | 5 |

## TABLE 18 (Continued)
## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | D. MATERNITY SERVICE | | | | | | | | | | E. CHILD HEALTH SERVICES | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Admissions to Well Child Med. Service | | |
| | Patients Admitted to Maternity Medical Service 1-2 | Visits by Antepartum Cases to Medical Conferences 3 | Patients given Postpartum Med. Examinations 4 | Patients Admitted to Maternity Nursing Service 5 | Field Nursing Visits 6 | Office Nursing Visits 7 | Number of Midwife Meetings 8 | Visits for Midwife Supervision 9 | No. of Midwife Del. Supervised by Health Dept. Personnel 10 | Individuals Completing Classes for Expectant Parents 11 | Infants 1a,2a | Ages 1–4 1b,2b | Ages 5 and Over 1c,2c |
| Total 1965 | 13529 | 41177 | 6885 | 23403 | 53184 | 71044 | 203 | 771 | 37 | 246 | 17343 | 17770 | 8224 |
| Alachua | 230 | 705 | 108 | 640 | 2388 | 1563 | 0 | 20 | 0 | 4 | 148 | 2 | 29 |
| Baker | 14 | 13 | 2 | 88 | 88 | 117 | 0 | 6 | 0 | 0 | 9 | 1 | 0 |
| Bay | 103 | 103 | 0 | 155 | 456 | 199 | 0 | 16 | 0 | 0 | 144 | 6 | 1 |
| Bradford | 52 | 119 | 2 | 60 | 219 | 38 | 0 | 13 | 0 | 0 | 41 | 61 | 7 |
| Brevard | 381 | 1375 | 263 | 642 | 4061 | 3625 | 20 | 37 | 13 | 0 | 166 | 26 | 138 |
| Broward | 569 | 781 | 721 | 656 | 1739 | 2634 | 27 | 17 | 11 | 0 | 602 | 61 | 22 |
| Calhoun | 26 | 52 | 10 | 57 | 69 | 137 | 0 | 17 | 0 | 0 | 5 | 1 | 1 |
| Charlotte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Citrus | 2 | 0 | 2 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Clay | 87 | 243 | 0 | 149 | 478 | 337 | 0 | 0 | 1 | 73 | 37 | 15 | 70 |
| Collier | 234 | 600 | 38 | 424 | 413 | 1127 | 2 | 7 | 0 | 0 | 67 | 22 | 19 |
| Columbia | 151 | 174 | 68 | 167 | 325 | 322 | 12 | 37 | 0 | 0 | 115 | 36 | 22 |
| Dade | 2798 | 8806 | 1158 | 5933 | 15974 | 12993 | 9 | 18 | 0 | 0 | 7226 | 11414 | 2885 |
| DeSoto | 2 | 2 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dixie | 15 | 279 | 33 | 96 | 48 | 437 | 0 | 0 | 0 | 0 | 27 | 5 | 9 |
| Duval | 118 | 247 | 50 | 529 | 770 | 731 | 6 | 15 | 0 | 3 | 577 | 60 | 13 |
| Escambia | 331 | 603 | 175 | 483 | 687 | 942 | 1 | 14 | 0 | 0 | 552 | 171 | 10 |
| Flagler | 68 | 253 | 42 | 76 | 105 | 317 | 5 | 0 | 0 | 0 | 48 | 4 | 8 |
| Franklin | 15 | 13 | 3 | 37 | 45 | 70 | 5 | 4 | 0 | 0 | 3 | 2 | 0 |
| Gadsden | 509 | 1423 | 72 | 778 | 696 | 1579 | 10 | 157 | 0 | 0 | 432 | 316 | 113 |
| Gilchrist | 2 | 6 | 4 | 22 | 49 | 37 | 0 | 10 | 0 | 0 | 3 | 0 | 0 |
| Glades | 35 | 88 | 0 | 50 | 107 | 142 | 0 | 0 | 0 | 0 | 4 | 2 | 4 |
| Gulf | 31 | 44 | 12 | 80 | 130 | 719 | 0 | 18 | 0 | 0 | 12 | 0 | 0 |
| Hamilton | 59 | 84 | 34 | 133 | 247 | 553 | 4 | 0 | 0 | 0 | 20 | 4 | 2 |
| Hardee | 42 | 38 | 14 | 39 | 47 | 145 | 1 | 6 | 1 | 0 | 16 | 0 | 6 |
| Hendry | 79 | 192 | 8 | 175 | 278 | 625 | 0 | 0 | 0 | 28 | 54 | 33 | 21 |
| Hernando | 13 | 24 | 2 | 11 | 6 | 22 | 0 | 3 | 0 | 0 | 1 | 1 | 0 |
| Highlands | 1 | 1 | 0 | 45 | 32 | 64 | 0 | 17 | 2 | 0 | 12 | 8 | 40 |
| Hillsborough | 401 | 1472 | 178 | 1859 | 3732 | 2139 | 0 | 5 | 0 | 0 | 2158 | 3115 | 3262 |
| Holmes | 9 | 13 | 2 | 27 | 16 | 38 | 5 | 2 | 0 | 0 | 8 | 13 | 2 |
| Indian River | 31 | 45 | 3 | 86 | 101 | 187 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jackson | 109 | 133 | 53 | 268 | 175 | 1036 | 1 | 58 | 0 | 0 | 57 | 18 | 9 |
| Jefferson | 37 | 79 | 20 | 107 | 131 | 180 | 3 | 0 | 0 | 0 | 16 | 3 | 1 |
| Lafayette | 14 | 23 | 7 | 38 | 68 | 119 | 1 | 4 | 0 | 0 | 10 | 8 | 9 |
| Lake | 142 | 309 | 51 | 181 | 245 | 421 | 0 | 17 | 0 | 0 | 44 | 2 | 0 |
| Lee | 296 | 325 | 119 | 527 | 774 | 1294 | 2 | 3 | 0 | 0 | 106 | 0 | 0 |
| Leon | 114 | 335 | 27 | 256 | 823 | 434 | 8 | 19 | 0 | 1 | 77 | 165 | 279 |
| Levy | 126 | 287 | 45 | 146 | 129 | 157 | 1 | 0 | 0 | 0 | 58 | 9 | 4 |
| Liberty | 12 | 30 | 2 | 11 | 3 | 43 | 0 | 0 | 0 | 0 | 6 | 8 | 7 |
| Madison | 77 | 180 | 82 | 142 | 336 | 522 | 2 | 8 | 0 | 0 | 26 | 2 | 15 |
| Manatee | 200 | 793 | 140 | 212 | 559 | 1306 | 0 | 0 | 0 | 0 | 28 | 11 | 16 |
| Marion | 0 | 0 | 0 | 102 | 297 | 23 | 1 | 20 | 0 | 0 | 0 | 0 | 0 |
| Martin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Monroe | 73 | 105 | 21 | 114 | 236 | 464 | 8 | 7 | 0 | 0 | 10 | 8 | 6 |
| Nassau | 0 | 0 | 0 | 41 | 46 | 11 | 4 | 43 | 0 | 0 | 2 | 1 | 1 |
| Okaloosa | 49 | 59 | 54 | 214 | 288 | 327 | 0 | 3 | 0 | 0 | 14 | 0 | 0 |
| Okeechobee | 0 | 0 | 0 | 3 | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Orange | 1096 | 2939 | 563 | 1492 | 1177 | 6931 | 21 | 28 | 2 | 0 | 546 | 192 | 236 |
| Osceola | 89 | 343 | 62 | 75 | 99 | 374 | 4 | 1 | 3 | 0 | 73 | 28 | 4 |
| Palm Beach | 692 | 2384 | 469 | 996 | 4955 | 4090 | 0 | 0 | 0 | 0 | 1175 | 335 | 264 |
| Pasco | 31 | 48 | 16 | 89 | 250 | 262 | 0 | 2 | 0 | 0 | 19 | 5 | 1 |
| Pinellas | 1234 | 6133 | 738 | 1300 | 2259 | 7473 | 0 | 0 | 0 | 21 | 994 | 1143 | 268 |
| Polk | 1427 | 4689 | 848 | 1790 | 3820 | 7803 | 1 | 10 | 0 | 0 | 1027 | 83 | 70 |
| Putnam | 157 | 508 | 64 | 152 | 126 | 781 | 11 | 6 | 1 | 0 | 72 | 19 | 27 |
| St. Johns | 47 | 66 | 23 | 104 | 171 | 127 | 11 | 3 | 1 | 0 | 14 | 5 | 2 |
| St. Lucie | 245 | 740 | 0 | 261 | 106 | 1039 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| Sarasota | 189 | 1123 | 174 | 220 | 1035 | 1284 | 0 | 0 | 0 | 50 | 0 | 0 | 0 |
| Seminole | 135 | 341 | 121 | 325 | 646 | 603 | 11 | 8 | 0 | 66 | 75 | 7 | 123 |
| Sumter | 43 | 46 | 27 | 130 | 155 | 219 | 4 | 32 | 0 | 0 | 0 | 0 | 0 |
| Suwannee | 48 | 93 | 24 | 81 | 59 | 261 | 0 | 3 | 0 | 0 | 32 | 13 | 37 |
| Taylor | 48 | 73 | 11 | 58 | 43 | 147 | 2 | 5 | 0 | 0 | 0 | 1 | 2 |
| Union | 46 | 152 | 17 | 53 | 55 | 153 | 0 | 0 | 0 | 0 | 76 | 25 | 28 |
| Volusia | 279 | 957 | 65 | 277 | 666 | 1048 | 0 | 34 | 0 | 0 | 267 | 266 | 113 |
| Wakulla | 24 | 48 | 20 | 17 | 26 | 18 | 0 | 3 | 2 | 0 | 16 | 14 | 6 |
| Walton | 5 | 2 | 3 | 21 | 24 | 23 | 0 | 5 | 0 | 0 | 2 | 5 | 6 |
| Washington | 37 | 36 | 15 | 99 | 91 | 219 | 0 | 9 | 0 | 0 | 9 | 15 | 6 |

## TABLE 18 (Continued)
## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | E. CHILD HEALTH SERVICES (Continued) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Visits to Medical Conference | | | Admissions to Nursing Service | | | Field Nursing Visits | | | Office Nursing Visits | | |
| | Infants 3a | Ages 1–4 3b | Ages 5–over 3c | Infants 5a | Ages 1–4 5b | Ages 5–over 5c | Infants 6a | Ages 1–4 6b | Ages 5–over 6c | Infants 7a | Ages 1–4 7b | Ages 5–over 7c |
| Total 1965 | 33745 | 26613 | 11304 | 39161 | 39359 | 89641 | 77222 | 78185 | 74910 | 44107 | 39044 | 147827 |
| Alachua | 153 | 2 | 29 | 746 | 300 | 1168 | 2622 | 1143 | 1546 | 444 | 101 | 681 |
| Baker | 9 | 1 | 0 | 129 | 202 | 321 | 210 | 351 | 333 | 19 | 26 | 201 |
| Bay | 493 | 46 | 2 | 366 | 242 | 428 | 1199 | 820 | 873 | 548 | 86 | 949 |
| Bradford | 54 | 78 | 13 | 92 | 250 | 362 | 295 | 629 | 451 | 5 | 9 | 393 |
| Brevard | 255 | 45 | 139 | 875 | 766 | 1198 | 2584 | 3605 | 4240 | 421 | 253 | 804 |
| Broward | 843 | 87 | 33 | 2531 | 483 | 843 | 4006 | 983 | 1530 | 1298 | 287 | 369 |
| Calhoun | 7 | 1 | 1 | 81 | 75 | 563 | 140 | 169 | 756 | 44 | 42 | 102 |
| Charlotte | 0 | 0 | 0 | 48 | 53 | 108 | 38 | 61 | 691 | 99 | 192 | 241 |
| Citrus | 0 | 0 | 0 | 29 | 21 | 46 | 33 | 26 | 65 | 0 | 0 | 14 |
| Clay | 44 | 21 | 130 | 130 | 218 | 1473 | 418 | 382 | 667 | 74 | 92 | 1914 |
| Collier | 97 | 25 | 20 | 235 | 172 | 353 | 281 | 167 | 373 | 261 | 188 | 225 |
| Columbia | 115 | 36 | 22 | 163 | 239 | 128 | 182 | 272 | 127 | 134 | 129 | 136 |
| Dade | 14788 | 17086 | 4327 | 8987 | 14425 | 22486 | 23214 | 38270 | 13789 | 11796 | 14212 | 58454 |
| DeSoto | 0 | 0 | 0 | 29 | 7 | 146 | 34 | 7 | 148 | 1 | 0 | 152 |
| Dixie | 31 | 5 | 9 | 46 | 51 | 73 | 40 | 46 | 70 | 55 | 33 | 29 |
| Duval | 1063 | 104 | 17 | 1949 | 399 | 467 | 2211 | 546 | 516 | 2859 | 342 | 195 |
| Escambia | 2058 | 505 | 20 | 1330 | 438 | 921 | 2716 | 1130 | 1747 | 1782 | 504 | 3014 |
| Flagler | 80 | 11 | 19 | 82 | 66 | 208 | 129 | 39 | 142 | 154 | 78 | 236 |
| Franklin | 3 | 2 | 0 | 47 | 124 | 104 | 103 | 246 | 105 | 14 | 7 | 46 |
| Gadsden | 794 | 635 | 231 | 917 | 1554 | 752 | 922 | 1902 | 590 | 838 | 692 | 455 |
| Gilchrist | 3 | 0 | 0 | 59 | 156 | 438 | 62 | 127 | 154 | 106 | 301 | 787 |
| Glades | 4 | 4 | 9 | 40 | 28 | 26 | 121 | 123 | 115 | 26 | 177 | 198 |
| Gulf | 12 | 0 | 0 | 41 | 26 | 62 | 66 | 78 | 145 | 52 | 50 | 102 |
| Hamilton | 21 | 6 | 2 | 134 | 248 | 253 | 355 | 482 | 235 | 141 | 107 | 227 |
| Hardee | 16 | 0 | 7 | 39 | 10 | 157 | 72 | 13 | 159 | 10 | 3 | 76 |
| Hendry | 64 | 39 | 28 | 171 | 146 | 154 | 254 | 365 | 371 | 78 | 190 | 344 |
| Hernando | 1 | 1 | 0 | 103 | 51 | 43 | 103 | 52 | 41 | 110 | 197 | 173 |
| Highlands | 14 | 14 | 45 | 151 | 27 | 134 | 198 | 23 | 143 | 13 | 17 | 60 |
| Hillsborough | 2917 | 4061 | 3799 | 5160 | 7554 | 12837 | 4785 | 5295 | 9080 | 7516 | 10735 | 15681 |
| Holmes | 11 | 18 | 3 | 10 | 33 | 775 | 4 | 11 | 17 | 8 | 53 | 1221 |
| Indian River | 0 | 0 | 0 | 112 | 20 | 703 | 488 | 87 | 203 | 34 | 4 | 631 |
| Jackson | 80 | 26 | 17 | 281 | 121 | 115 | 338 | 191 | 210 | 143 | 51 | 111 |
| Jefferson | 17 | 3 | 1 | 164 | 368 | 184 | 272 | 395 | 150 | 75 | 150 | 84 |
| Lafayette | 12 | 14 | 11 | 39 | 122 | 114 | 64 | 172 | 118 | 48 | 88 | 64 |
| Lake | 45 | 2 | 0 | 218 | 299 | 573 | 300 | 354 | 567 | 116 | 124 | 385 |
| Lee | 113 | 0 | 0 | 411 | 365 | 254 | 692 | 487 | 280 | 244 | 58 | 104 |
| Leon | 83 | 179 | 471 | 871 | 1093 | 1622 | 1590 | 3539 | 3057 | 102 | 321 | 902 |
| Levy | 65 | 9 | 4 | 88 | 76 | 102 | 122 | 92 | 103 | 27 | 11 | 32 |
| Liberty | 7 | 8 | 10 | 13 | 6 | 24 | 8 | 3 | 13 | 13 | 4 | 25 |
| Madison | 28 | 2 | 15 | 117 | 107 | 625 | 359 | 163 | 306 | 87 | 61 | 770 |
| Manatee | 47 | 12 | 26 | 410 | 771 | 2047 | 587 | 364 | 1017 | 594 | 1394 | 2291 |
| Marion | 0 | 0 | 0 | 176 | 184 | 560 | 685 | 570 | 606 | 20 | 6 | 499 |
| Martin | 0 | 0 | 0 | 3 | 13 | 118 | 3 | 15 | 133 | 9 | 30 | 10 |
| Monroe | 11 | 10 | 9 | 318 | 420 | 812 | 419 | 662 | 424 | 210 | 671 | 920 |
| Nassau | 2 | 2 | 1 | 88 | 145 | 390 | 193 | 304 | 649 | 15 | 35 | 505 |
| Okaloosa | 14 | 0 | 0 | 594 | 258 | 479 | 690 | 461 | 1015 | 34 | 46 | 298 |
| Okeechobee | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 2 |
| Orange | 909 | 327 | 268 | 2048 | 1099 | 3225 | 2294 | 1319 | 2331 | 1559 | 749 | 2320 |
| Osceola | 147 | 79 | 13 | 90 | 36 | 678 | 83 | 61 | 76 | 109 | 39 | 844 |
| Palm Beach | 2796 | 743 | 633 | 2099 | 656 | 4176 | 8304 | 2978 | 6927 | 3000 | 891 | 8022 |
| Pasco | 24 | 6 | 1 | 107 | 241 | 153 | 344 | 728 | 469 | 133 | 122 | 254 |
| Pinellas | 2158 | 1512 | 328 | 1580 | 2081 | 12745 | 3954 | 3750 | 7161 | 2838 | 2937 | 25372 |
| Polk | 2176 | 134 | 90 | 2312 | 1053 | 6604 | 4558 | 1868 | 3495 | 4202 | 926 | 8170 |
| Putnam | 72 | 21 | 30 | 404 | 76 | 110 | 480 | 157 | 94 | 104 | 53 | 120 |
| St. Johns | 25 | 9 | 5 | 76 | 47 | 100 | 184 | 75 | 152 | 26 | 22 | 36 |
| St. Lucie | 0 | 0 | 0 | 109 | 93 | 24 | 130 | 119 | 29 | 1 | 1 | 1 |
| Santa Rosa | 5 | 0 | 0 | 139 | 24 | 650 | 160 | 75 | 243 | 5 | 7 | 667 |
| Sarasota | 0 | 0 | 0 | 220 | 90 | 903 | 611 | 196 | 2203 | 1 | 1 | 414 |
| Seminole | 146 | 15 | 131 | 421 | 144 | 629 | 626 | 216 | 1565 | 265 | 111 | 1111 |
| Sumter | 0 | 0 | 0 | 103 | 105 | 112 | 131 | 69 | 51 | 55 | 93 | 106 |
| Suwannee | 35 | 19 | 48 | 63 | 132 | 106 | 103 | 280 | 143 | 43 | 51 | 90 |
| Taylor | 0 | 2 | 2 | 43 | 42 | 63 | 58 | 79 | 155 | 34 | 15 | 19 |
| Union | 91 | 39 | 53 | 109 | 72 | 74 | 125 | 220 | 229 | 91 | 41 | 55 |
| Volusia | 653 | 571 | 213 | 498 | 452 | 2606 | 729 | 545 | 1232 | 891 | 762 | 4073 |
| Wakulla | 18 | 14 | 6 | 18 | 40 | 149 | 23 | 33 | 87 | 7 | 13 | 76 |
| Walton | 2 | 6 | 6 | 29 | 20 | 722 | 42 | 20 | 139 | 22 | 12 | 954 |
| Washington | 14 | 16 | 7 | 70 | 124 | 57 | 76 | 175 | 53 | 44 | 41 | 11 |

## TABLE 18 (Continued)

## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | F. SCHOOL HEALTH | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pupils Examined by Physicians | | | | | | Screening by Other Health Dept. Personnel | | | | | | |
| | Parent Present | | | Parent Not Present | | | Visual | | | Audiometer | | | |
| | Number Examined 1a | Referred for Further Diagnosis & Treatment 1b | Completed Referrals 1c | Number Examined 2a | Referred for Further Diagnosis & Treatment 2b | Completed Referrals 2c | Number Examined 3a | Referred for Further Diagnosis & Treatment 3b | Completed Referrals 3c | Number Examined 4a | Referred for Further Diagnosis & Treatment 4b | Completed Referrals 4c | Nurse-Teacher Conferences 7 |
| Total 1965 | 35526 | 5947 | 5132 | 39843 | 3319 | 693 | 439467 | 35766 | 13372 | 215289 | 5106 | 1415 | 111529 |
| Alachua | 2 | 0 | 1 | 0 | 0 | 1 | 9644 | 821 | 105 | 6681 | 152 | 11 | 2115 |
| Baker | 133 | 1 | 0 | 10 | 0 | 0 | 865 | 68 | 4 | 0 | 0 | 0 | 88 |
| Bay | 52 | 0 | 0 | 306 | 19 | 0 | 5095 | 977 | 318 | 127 | 18 | 2 | 1332 |
| Bradford | 289 | 1 | 0 | 269 | 3 | 0 | 467 | 18 | 6 | 0 | 0 | 0 | 70 |
| Brevard | 15 | 5 | 1 | 510 | 40 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1273 |
| Broward | 137 | 18 | 0 | 1450 | 11 | 3 | 5142 | 1924 | 421 | 26 | 6 | 1 | 4864 |
| Calhoun | 86 | 0 | 0 | 110 | 1 | 0 | 1577 | 137 | 42 | 9 | 4 | 0 | 442 |
| Charlotte | 1 | 1 | 0 | 479 | 79 | 1 | 502 | 51 | 2 | 555 | 6 | 1 | 480 |
| Citrus | 299 | 0 | 0 | 952 | 25 | 0 | 172 | 40 | 2 | 0 | 0 | 0 | 345 |
| Clay | 229 | 23 | 2 | 53 | 2 | 0 | 3641 | 210 | 123 | 0 | 0 | 0 | 941 |
| Collier | 82 | 26 | 0 | 206 | 33 | 0 | 1368 | 196 | 32 | 641 | 39 | 2 | 700 |
| Columbia | 54 | 9 | 8 | 275 | 32 | 27 | 320 | 22 | 19 | 102 | 4 | 3 | 23 |
| Dade | 1617 | 0 | 0 | 14095 | 0 | 0 | 87183 | 6546 | 1948 | 34116 | 1176 | 0 | 26928 |
| DeSoto | 87 | 29 | 10 | 684 | 42 | 2 | 850 | 159 | 37 | 800 | 92 | 0 | 815 |
| Dixie | 73 | 7 | 0 | 392 | 20 | 10 | 298 | 20 | 5 | 12 | 1 | 0 | 76 |
| Duval | 95 | 0 | 0 | 3 | 0 | 0 | 6243 | 1265 | 409 | 21 | 26 | 43 | 1061 |
| Escambia | 10 | 0 | 0 | 5 | 0 | 0 | 20131 | 2227 | 1234 | 2900 | 113 | 26 | 3973 |
| Flagler | 18 | 0 | 0 | 9 | 0 | 0 | 494 | 63 | 2 | 13 | 1 | 1 | 55 |
| Franklin | 96 | 3 | 0 | 129 | 2 | 0 | 147 | 15 | 1 | 175 | 3 | 0 | 107 |
| Gadsden | 422 | 35 | 1 | 2236 | 357 | 3 | 1115 | 151 | 43 | 1755 | 38 | 16 | 1170 |
| Gilchrist | 121 | 16 | 2 | 47 | 8 | 0 | 319 | 60 | 1 | 12 | 5 | 1 | 480 |
| Glades | 37 | 4 | 2 | 119 | 31 | 26 | 644 | 25 | 10 | 67 | 3 | 3 | 168 |
| Gulf | 133 | 11 | 11 | 5 | 0 | 0 | 1308 | 116 | 100 | 8 | 0 | 0 | 300 |
| Hamilton | 160 | 13 | 3 | 54 | 0 | 2 | 133 | 37 | 4 | 0 | 0 | 0 | 348 |
| Hardee | 82 | 5 | 5 | 506 | 22 | 5 | 83 | 7 | 3 | 120 | 0 | 0 | 383 |
| Hendry | 107 | 8 | 7 | 530 | 75 | 9 | 666 | 213 | 111 | 131 | 8 | 21 | 574 |
| Hernando | 211 | 8 | 1 | 651 | 61 | 9 | 39 | 0 | 0 | 5 | 0 | 0 | 97 |
| Highlands | 224 | 56 | 0 | 549 | 2 | 147 | 222 | 46 | 12 | 0 | 0 | 0 | 354 |
| Hillsborough | 6919 | 4705 | 4530 | 3728 | 709 | 271 | 93953 | 5082 | 2676 | 49397 | 1180 | 408 | 15021 |
| Holmes | 261 | 84 | 0 | 778 | 153 | 0 | 1398 | 163 | 0 | 748 | 43 | 0 | 99 |
| Indian River | 0 | 0 | 0 | 0 | 0 | 0 | 3249 | 206 | 70 | 99 | 14 | 1 | 435 |
| Jackson | 17 | 0 | 0 | 80 | 0 | 0 | 486 | 65 | 20 | 47 | 31 | 20 | 530 |
| Jefferson | 358 | 12 | 2 | 267 | 72 | 29 | 345 | 49 | 16 | 316 | 5 | 3 | 73 |
| Lafayette | 8 | 0 | 0 | 126 | 3 | 0 | 194 | 23 | 8 | 346 | 2 | 1 | 29 |
| Lake | 823 | 3 | 2 | 61 | 0 | 0 | 4024 | 303 | 278 | 586 | 52 | 32 | 743 |
| Lee | 0 | 0 | 0 | 1 | 0 | 0 | 1609 | 194 | 61 | 3 | 1 | 0 | 368 |
| Leon | 435 | 19 | 36 | 403 | 172 | 1 | 4355 | 450 | 238 | 3240 | 230 | 84 | 1416 |
| Levy | 125 | 4 | 0 | 771 | 14 | 0 | 2007 | 113 | 26 | 2120 | 53 | 4 | 126 |
| Liberty | 31 | 0 | 0 | 169 | 0 | 0 | 112 | 11 | 10 | 134 | 0 | 0 | 46 |
| Madison | 0 | 0 | 0 | 11 | 0 | 0 | 451 | 80 | 26 | 85 | 8 | 0 | 218 |
| Manatee | 127 | 0 | 0 | 3 | 1 | 1 | 180 | 85 | 70 | 134 | 21 | 3 | 1354 |
| Marion | 103 | 0 | 0 | 1116 | 64 | 2 | 2351 | 249 | 82 | 15 | 29 | 0 | 1313 |
| Martin | 161 | 27 | 0 | 54 | 4 | 0 | 1310 | 111 | 54 | 58 | 0 | 0 | 200 |
| Monroe | 74 | 3 | 1 | 223 | 41 | 28 | 5679 | 832 | 225 | 5413 | 133 | 60 | 444 |
| Nassau | 108 | 2 | 0 | 79 | 9 | 3 | 424 | 61 | 40 | 339 | 25 | 17 | 738 |
| Okaloosa | 61 | 1 | 0 | 12 | 0 | 0 | 1192 | 249 | 3 | 5 | 0 | 0 | 250 |
| Okeechobee | 65 | 0 | 0 | 4 | 0 | 0 | 1741 | 72 | 1 | 185 | 2 | 0 | 130 |
| Orange | 244 | 8 | 0 | 437 | 92 | 9 | 21664 | 1491 | 935 | 11259 | 153 | 66 | 2981 |
| Osceola | 103 | 1 | 0 | 2 | 0 | 0 | 2243 | 179 | 40 | 55 | 4 | 1 | 299 |
| Palm Beach | 35 | 20 | 5 | 1499 | 397 | 5 | 29452 | 2341 | 637 | 12724 | 446 | 58 | 9263 |
| Pasco | 32 | 7 | 1 | 3 | 0 | 0 | 190 | 19 | 11 | 58 | 6 | 4 | 62 |
| Pinellas | 17771 | 621 | 477 | 1115 | 74 | 57 | 68215 | 3805 | 1166 | 55808 | 526 | 225 | 12638 |
| Polk | 712 | 57 | 15 | 203 | 20 | 6 | 7215 | 684 | 766 | 1054 | 80 | 94 | 7628 |
| Putnam | 60 | 0 | 0 | 22 | 0 | 0 | 927 | 356 | 82 | 0 | 0 | 0 | 196 |
| St. Johns | 24 | 17 | 2 | 1285 | 139 | 13 | 909 | 125 | 52 | 0 | 1 | 0 | 273 |
| St. Lucie | 0 | 0 | 0 | 0 | 0 | 0 | 3774 | 272 | 38 | 184 | 24 | 1 | 133 |
| Santa Rosa | 167 | 9 | 2 | 496 | 60 | 9 | 854 | 215 | 102 | 156 | 8 | 0 | 431 |
| Sarasota | 0 | 0 | 1 | 111 | 67 | 7 | 7496 | 587 | 180 | 7033 | 56 | 17 | 1817 |
| Seminole | 175 | 2 | 0 | 2 | 0 | 1 | 5777 | 565 | 172 | 3963 | 134 | 181 | 1484 |
| Sumter | 16 | 0 | 0 | 746 | 212 | 0 | 988 | 90 | 34 | 7 | 5 | 0 | 134 |
| Suwannee | 34 | 5 | 0 | 180 | 15 | 2 | 279 | 55 | 35 | 95 | 1 | 0 | 242 |
| Taylor | 143 | 1 | 0 | 1 | 0 | 0 | 26 | 14 | 6 | 3 | 0 | 0 | 175 |
| Union | 56 | 5 | 3 | 60 | 3 | 4 | 95 | 31 | 12 | 0 | 0 | 0 | 86 |
| Volusia | 744 | 37 | 1 | 693 | 122 | 0 | 13367 | 914 | 145 | 10598 | 132 | 3 | 183 |
| Wakulla | 100 | 1 | 0 | 108 | 0 | 0 | 1206 | 63 | 15 | 736 | 3 | 0 | 233 |
| Walton | 295 | 8 | 0 | 281 | 11 | 0 | 706 | 101 | 43 | 10 | 3 | 1 | 105 |
| Washington | 267 | 9 | 0 | 79 | 0 | 0 | 355 | 46 | 3 | 0 | 0 | 0 | 71 |

## TABLE 18 (Continued)

## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | G. DENTAL HEALTH (Dentist Only) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dental Inspections | | | | Number Requiring Treatment | | | | | | | | |
| | Ages 1–4 1a | Ages 5–17 1b | Maternity Patients 1c | Other Adults 1d | Ages 1–4 2a | Ages 5–17 2b | Maternity Patients 2c | Other Adults 2d | Number Completing Treatments 3 | Number Admitted to Clinic for Treatment 4 | Total Fillings 5 | Total Extractions 6 | Total Applications of Fluoride 7 |
| Total 1965 | 136 | 72451 | 59 | 58 | 62 | 42621 | 60 | 43 | 9362 | 24878 | 49769 | 22761 | 1264 |
| Alachua | 0 | 401 | 0 | 0 | 0 | 323 | 0 | 0 | 33 | 1148 | 1386 | 742 | 0 |
| Baker | 0 | 208 | 0 | 0 | 0 | 118 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bay | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bradford | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Brevard | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Broward | 1 | 1585 | 0 | 0 | 2 | 1254 | 0 | 0 | 166 | 636 | 2874 | 857 | 114 |
| Calhoun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Charlotte | 48 | 1068 | 0 | 0 | 28 | 458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Citrus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Clay | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Collier | 0 | 1996 | 0 | 0 | 0 | 1053 | 0 | 0 | 154 | 540 | 886 | 775 | 195 |
| Columbia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dade | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 483 | 2583 | 10644 | 2255 | 0 |
| DeSoto | 0 | 707 | 0 | 0 | 0 | 352 | 0 | 0 | 22 | 0 | 0 | 0 | 0 |
| Dixie | 12 | 110 | 17 | 0 | 8 | 72 | 17 | 0 | 1 | 0 | 0 | 0 | 0 |
| Duval | 0 | 538 | 0 | 0 | 0 | 820 | 0 | 0 | 288 | 878 | 2304 | 1021 | 15 |
| Escambia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 256 | 375 | 1476 | 655 | 151 |
| Flagler | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 32 | 107 | 65 | 82 | 79 |
| Franklin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gadsden | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gilchrist | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Glades | 4 | 556 | 0 | 3 | 3 | 422 | 0 | 1 | 66 | 176 | 341 | 175 | 0 |
| Gulf | 0 | 72 | 0 | 0 | 0 | 67 | 0 | 0 | 24 | 33 | 171 | 32 | 5 |
| Hamilton | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hardee | 1 | 688 | 0 | 1 | 1 | 363 | 0 | 1 | 53 | 81 | 391 | 100 | 0 |
| Hendry | 0 | 1168 | 0 | 0 | 0 | 1009 | 0 | 0 | 36 | 235 | 351 | 230 | 0 |
| Hernando | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Highlands | 0 | 480 | 0 | 0 | 0 | 339 | 0 | 0 | 9 | 47 | 130 | 36 | 0 |
| Hillsborough | 0 | 11482 | 0 | 0 | 0 | 7329 | 0 | 0 | 2736 | 2205 | 3161 | 2509 | 0 |
| Holmes | 0 | 329 | 0 | 0 | 0 | 240 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Indian River | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jackson | 0 | 1255 | 0 | 0 | 0 | 695 | 0 | 0 | 21 | 292 | 787 | 260 | 0 |
| Jefferson | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 | 248 | 35 | 2 |
| Lafayette | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lake | 0 | 4011 | 0 | 0 | 0 | 2907 | 0 | 0 | 1 | 1265 | 2201 | 586 | 24 |
| Lee | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Leon | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Levy | 7 | 108 | 0 | 30 | 6 | 91 | 0 | 26 | 80 | 120 | 40 | 276 | 0 |
| Liberty | 0 | 319 | 0 | 0 | 0 | 227 | 0 | 0 | 13 | 255 | 490 | 129 | 1 |
| Madison | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Manatee | 14 | 1697 | 15 | 11 | 8 | 863 | 10 | 9 | 289 | 339 | 706 | 326 | 0 |
| Marion | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1498 | 1595 | 1037 | 0 |
| Martin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Monroe | 2 | 3172 | 6 | 2 | 1 | 1748 | 5 | 2 | 130 | 180 | 461 | 172 | 47 |
| Nassau | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Okaloosa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Okeechobee | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Orange | 0 | 19970 | 0 | 0 | 0 | 9725 | 0 | 0 | 283 | 2449 | 4461 | 2499 | 0 |
| Osceola | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Palm Beach | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1759 | 5493 | 4934 | 3238 | 283 |
| Pasco | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pinellas | 0 | 10783 | 0 | 0 | 0 | 5436 | 0 | 0 | 845 | 1019 | 3786 | 654 | 0 |
| Polk | 0 | 2439 | 0 | 0 | 0 | 1563 | 0 | 0 | 601 | 1035 | 1457 | 1914 | 0 |
| Putnam | 0 | 679 | 0 | 0 | 0 | 612 | 0 | 0 | 40 | 293 | 361 | 302 | 36 |
| St. Johns | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| St. Lucie | 0 | 2316 | 0 | 0 | 0 | 1603 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Santa Rosa | 0 | 1061 | 0 | 0 | 0 | 762 | 0 | 3 | 45 | 369 | 1448 | 732 | 33 |
| Sarasota | 0 | 1952 | 31 | 0 | 0 | 1046 | 28 | 0 | 398 | 419 | 977 | 224 | 0 |
| Seminole | 45 | 191 | 0 | 0 | 2 | 181 | 0 | 0 | 52 | 108 | 61 | 122 | 0 |
| Sumter | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Suwannee | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Taylor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Union | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volusia | 2 | 1054 | 0 | 0 | 2 | 890 | 0 | 0 | 429 | 572 | 1470 | 771 | 279 |
| Wakulla | 0 | 55 | 0 | 0 | 0 | 53 | 0 | 0 | 15 | 38 | 100 | 15 | 0 |
| Walton | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Washington | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## TABLE 18 (Continued)

## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | H. CHRONIC DISEASES | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cancer Service | | | | Diabetes Service | | | | | Heart Disease Control | | | Glaucoma | | |
| | Admission to Service 1 | Field Visits 2 | Office Visits 3 | Cervical Cytology Examination 4 | Admission to Service 5 | Field Visits 6 | Office Visits 7 | Relatives Tested 8 | Non-Relatives or Others Tested 9 | Admissions to Cardio-Vascular Disease 10 | Field Visits 11 | Office Visits 12 | Number Examined or Screened 13 | No. Referred for Further Diagnosis or Treatment 14 | Number Completing Referrals 15 |
| Total 1965 | 5112 | 18135 | 14980 | 11362 | 4752 | 20477 | 21138 | 1832 | 12384 | 7825 | 44729 | 18353 | 22097 | 763 | 295 |
| Alachua | 53 | 357 | 38 | 278 | 70 | 615 | 554 | 27 | 0 | 185 | 1200 | 251 | 0 | 0 | 0 |
| Baker | 9 | 16 | 10 | 0 | 17 | 6 | 77 | 9 | 2 | 79 | 36 | 172 | 0 | 0 | 0 |
| Bay | 23 | 77 | 0 | 0 | 48 | 186 | 24 | 0 | 0 | 48 | 225 | 71 | 0 | 0 | 0 |
| Bradford | 52 | 203 | 9 | 0 | 15 | 412 | 1 | 0 | 0 | 83 | 1249 | 84 | 0 | 0 | 0 |
| Brevard | 106 | 467 | 206 | 289 | 60 | 257 | 222 | 7 | 0 | 212 | 962 | 304 | 0 | 0 | 0 |
| Broward | 20 | 48 | 2 | 480 | 38 | 72 | 6 | 0 | 0 | 118 | 97 | 154 | 7021 | 309 | 211 |
| Calhoun | 42 | 123 | 62 | 0 | 46 | 124 | 147 | 27 | 231 | 61 | 634 | 69 | 0 | 0 | 0 |
| Charlotte | 18 | 177 | 11 | 0 | 27 | 115 | 201 | 6 | 0 | 56 | 732 | 124 | 3 | 3 | 2 |
| Citrus | 3 | 4 | 2 | 0 | 29 | 30 | 74 | 1 | 0 | 84 | 3 | 240 | 1 | 1 | 0 |
| Clay | 49 | 135 | 19 | 0 | 24 | 118 | 71 | 1 | 62 | 88 | 656 | 109 | 1 | 2 | 0 |
| Collier | 96 | 570 | 132 | 285 | 27 | 189 | 86 | 3 | 2 | 66 | 143 | 161 | 0 | 0 | 0 |
| Columbia | 18 | 6 | 24 | 0 | 82 | 17 | 204 | 0 | 0 | 23 | 55 | 5 | 0 | 0 | 0 |
| Dade | 132 | 1000 | 8 | 5109 | 64 | 179 | 33 | 0 | 0 | 312 | 1950 | 1879 | 2600 | 72 | 46 |
| DeSoto | 35 | 224 | 26 | 0 | 33 | 7 | 229 | 0 | 0 | 3 | 1 | 7 | 0 | 0 | 0 |
| Dixie | 7 | 26 | 11 | 146 | 6 | 11 | 98 | 3 | 5 | 47 | 45 | 268 | 0 | 0 | 0 |
| Duval | 22 | 49 | 3 | 11 | 23 | 35 | 66 | 0 | 0 | 43 | 74 | 21 | 0 | 0 | 0 |
| Escambia | 571 | 1698 | 1095 | 293 | 376 | 1669 | 1761 | 182 | 62 | 549 | 2815 | 715 | 0 | 0 | 0 |
| Flagler | 5 | 71 | 16 | 3 | 11 | 90 | 28 | 0 | 6 | 42 | 833 | 137 | 16 | 16 | 0 |
| Franklin | 28 | 78 | 51 | 0 | 18 | 16 | 78 | 12 | 0 | 23 | 58 | 20 | 0 | 0 | 0 |
| Gadsden | 50 | 206 | 19 | 0 | 64 | 70 | 200 | 37 | 32 | 227 | 979 | 1046 | 0 | 0 | 0 |
| Gilchrist | 8 | 59 | 14 | 0 | 29 | 80 | 63 | 18 | 115 | 111 | 135 | 534 | 0 | 0 | 0 |
| Glades | 3 | 18 | 9 | 0 | 12 | 35 | 79 | 11 | 27 | 37 | 69 | 54 | 0 | 0 | 0 |
| Gulf | 26 | 100 | 172 | 0 | 28 | 32 | 216 | 0 | 0 | 47 | 58 | 351 | 0 | 0 | 0 |
| Hamilton | 8 | 82 | 17 | 1 | 21 | 36 | 144 | 13 | 28 | 86 | 164 | 377 | 0 | 0 | 0 |
| Hardee | 24 | 20 | 32 | 0 | 33 | 1 | 55 | 2 | 1 | 16 | 83 | 5 | 0 | 0 | 0 |
| Hendry | 19 | 74 | 41 | 16 | 54 | 245 | 248 | 97 | 70 | 54 | 290 | 162 | 0 | 0 | 0 |
| Hernando | 5 | 15 | 2 | 0 | 7 | 0 | 11 | 0 | 0 | 8 | 0 | 18 | 0 | 0 | 0 |
| Highlands | 27 | 128 | 7 | 0 | 35 | 80 | 206 | 6 | 1 | 24 | 48 | 32 | 0 | 0 | 0 |
| Hillsborough | 769 | 1195 | 3619 | 391 | 1294 | 2688 | 7071 | 499 | 404 | 762 | 4236 | 302 | 368 | 20 | 17 |
| Holmes | 47 | 96 | 60 | 0 | 120 | 26 | 550 | 86 | 111 | 37 | 148 | 123 | 0 | 0 | 0 |
| Indian River | 30 | 162 | 17 | 26 | 59 | 1461 | 35 | 1 | 1 | 53 | 832 | 21 | 0 | 0 | 0 |
| Jackson | 48 | 213 | 19 | 0 | 50 | 11 | 339 | 45 | 380 | 62 | 85 | 193 | 0 | 0 | 0 |
| Jefferson | 32 | 52 | 21 | 265 | 53 | 32 | 193 | 2 | 425 | 273 | 67 | 293 | 0 | 0 | 0 |
| Lafayette | 12 | 34 | 5 | 0 | 10 | 14 | 80 | 0 | 0 | 39 | 40 | 307 | 0 | 0 | 0 |
| Lake | 63 | 108 | 40 | 0 | 54 | 121 | 30 | 0 | 0 | 47 | 75 | 18 | 0 | 0 | 0 |
| Lee | 18 | 37 | 10 | 0 | 25 | 33 | 110 | 4 | 948 | 33 | 40 | 60 | 0 | 0 | 0 |
| Leon | 110 | 154 | 202 | 128 | 67 | 496 | 268 | 4 | 0 | 79 | 856 | 1 | 0 | 0 | 0 |
| Levy | 19 | 44 | 2 | 122 | 39 | 101 | 47 | 20 | 12 | 111 | 162 | 238 | 0 | 0 | 0 |
| Liberty | 7 | 1 | 9 | 0 | 15 | 2 | 126 | 4 | 33 | 225 | 587 | 1291 | 0 | 0 | 0 |
| Madison | 12 | 58 | 2 | 0 | 21 | 20 | 260 | 0 | 0 | 23 | 18 | 61 | 0 | 0 | 0 |
| Manatee | 27 | 222 | 4 | 135 | 115 | 384 | 385 | 217 | 330 | 97 | 646 | 145 | 0 | 0 | 0 |
| Marion | 16 | 112 | 2 | 0 | 55 | 423 | 48 | 0 | 0 | 120 | 920 | 18 | 0 | 0 | 0 |
| Martin | 14 | 33 | 8 | 0 | 15 | 19 | 27 | 0 | 0 | 9 | 7 | 8 | 0 | 0 | 0 |
| Monroe | 92 | 201 | 157 | 9 | 41 | 92 | 82 | 83 | 2588 | 155 | 403 | 82 | 0 | 0 | 0 |
| Nassau | 52 | 131 | 44 | 0 | 29 | 80 | 27 | 8 | 0 | 73 | 175 | 78 | 1 | 1 | 1 |
| Okaloosa | 63 | 478 | 23 | 0 | 47 | 227 | 49 | 2 | 0 | 160 | 1864 | 285 | 0 | 0 | 0 |
| Okeechobee | 15 | 57 | 4 | 0 | 6 | 9 | 80 | 0 | 0 | 4 | 0 | 23 | 0 | 0 | 0 |
| Orange | 242 | 19 | 2874 | 309 | 39 | 72 | 190 | 5 | 919 | 107 | 215 | 159 | 6 | 5 | 3 |
| Osceola | 25 | 24 | 32 | 54 | 10 | 12 | 66 | 1 | 0 | 21 | 20 | 127 | 0 | 0 | 0 |
| Palm Beach | 149 | 2239 | 63 | 926 | 178 | 2374 | 817 | 0 | 30 | 550 | 6205 | 1503 | 0 | 0 | 0 |
| Pasco | 49 | 185 | 141 | 0 | 84 | 160 | 252 | 17 | 7 | 46 | 187 | 118 | 1605 | 83 | 14 |
| Pinellas | 456 | 2050 | 2626 | 711 | 155 | 399 | 1276 | 132 | 2063 | 947 | 5317 | 2875 | 1933 | 0 | 0 |
| Polk | 814 | 656 | 2349 | 1238 | 291 | 1092 | 1279 | 151 | 100 | 339 | 1441 | 621 | 8224 | 237 | 0 |
| Putnam | 17 | 94 | 10 | 0 | 19 | 36 | 124 | 0 | 41 | 60 | 549 | 409 | 0 | 0 | 0 |
| St. Johns | 21 | 51 | 10 | 0 | 68 | 112 | 167 | 26 | 6 | 17 | 39 | 3 | 2 | 0 | 0 |
| St. Lucie | 35 | 78 | 149 | 0 | 6 | 12 | 38 | 0 | 0 | 55 | 630 | 72 | 0 | 0 | 0 |
| Santa Rosa | 32 | 193 | 25 | 0 | 62 | 193 | 354 | 34 | 0 | 101 | 1029 | 475 | 0 | 0 | 0 |
| Sarasota | 60 | 431 | 1 | 34 | 24 | 201 | 0 | 0 | 868 | 59 | 510 | 41 | 0 | 0 | 0 |
| Seminole | 13 | 76 | 3 | 91 | 35 | 52 | 109 | 0 | 0 | 57 | 413 | 116 | 316 | 14 | 1 |
| Sumter | 47 | 144 | 67 | 12 | 49 | 17 | 97 | 13 | 1 | 24 | 36 | 51 | 0 | 0 | 0 |
| Suwannee | 23 | 124 | 15 | 0 | 28 | 100 | 51 | 9 | 5 | 55 | 296 | 232 | 0 | 0 | 0 |
| Taylor | 34 | 63 | 101 | 0 | 19 | 41 | 105 | 0 | 0 | 14 | 176 | 42 | 0 | 0 | 0 |
| Union | 6 | 2 | 14 | 0 | 19 | 8 | 92 | 0 | 0 | 26 | 11 | 76 | 0 | 0 | 0 |
| Volusia | 74 | 2049 | 117 | 0 | 156 | 4535 | 552 | 0 | 2464 | 176 | 2603 | 272 | 0 | 0 | 0 |
| Wakulla | 25 | 92 | 13 | 0 | 12 | 23 | 29 | 2 | 1 | 20 | 50 | 34 | 0 | 0 | 0 |
| Walton | 46 | 106 | 37 | 0 | 47 | 57 | 339 | 0 | 1 | 53 | 238 | 206 | 0 | 0 | 0 |
| Washington | 39 | 40 | 47 | 0 | 39 | 15 | 212 | 5 | 2 | 4 | 7 | 4 | 0 | 0 | 0 |

## TABLE 18 (Continued)

## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | H. CHRONIC DISEASES (Continued) | | | J. MENTAL HEALTH | | | | | | | | K. MISCELLANEOUS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Other Chronic Diseases | | | Admissions to Service | | | Field Visits | | Office Visits | | | Admissions to Morbidity Service | |
| | Admission to Service 16 | Field Visits 17 | Office Visits 18 | Children 1 | State Hospital Patients 2 | Other Adults 3 | With Patients 4 | About Patients 5 | With Patients 6 | About Patients 7 | Mental Health Conferences 8 | Under 65 1a | Over 65 1b |
| Total 1965 | 11355 | 63789 | 16177 | 8130 | 6740 | 7280 | 24250 | 23455 | 52838 | 40886 | 15701 | 10817 | 2096 |
| Alachua | 119 | 906 | 61 | 295 | 219 | 174 | 2225 | 2609 | 2725 | 1002 | 863 | 270 | 30 |
| Baker | 13 | 44 | 55 | 2 | 7 | 2 | 3 | 7 | 27 | 13 | 0 | 57 | 5 |
| Bay | 218 | 773 | 224 | 3 | 160 | 17 | 355 | 153 | 35 | 87 | 3 | 55 | 5 |
| Bradford | 161 | 1483 | 101 | 0 | 36 | 4 | 202 | 50 | 9 | 3 | 0 | 41 | 4 |
| Brevard | 460 | 1694 | 578 | 317 | 111 | 107 | 509 | 696 | 1474 | 3139 | 449 | 175 | 61 |
| Broward | 340 | 781 | 92 | 136 | 106 | 700 | 1788 | 232 | 4475 | 264 | 1825 | 591 | 19 |
| Calhoun | 56 | 237 | 55 | 18 | 54 | 17 | 42 | 110 | 44 | 56 | 176 | 75 | 6 |
| Charlotte | 43 | 805 | 188 | 32 | 3 | 18 | 48 | 70 | 49 | 148 | 44 | 31 | 12 |
| Citrus | 21 | 5 | 52 | 60 | 38 | 35 | 72 | 231 | 73 | 296 | 154 | 22 | 33 |
| Clay | 155 | 873 | 340 | 136 | 39 | 58 | 334 | 190 | 338 | 252 | 76 | 140 | 17 |
| Collier | 112 | 394 | 107 | 79 | 42 | 194 | 215 | 860 | 604 | 410 | 277 | 439 | 18 |
| Columbia | 62 | 149 | 40 | 1 | 40 | 4 | 51 | 25 | 79 | 35 | 12 | 21 | 22 |
| Dade | 251 | 854 | 63 | 2431 | 649 | 642 | 2648 | 3797 | 7629 | 6937 | 2537 | 1165 | 31 |
| DeSoto | 54 | 189 | 26 | 36 | 12 | 8 | 6 | 22 | 72 | 105 | 33 | 19 | 9 |
| Dixie | 42 | 42 | 229 | 25 | 8 | 27 | 26 | 44 | 51 | 50 | 8 | 145 | 0 |
| Duval | 85 | 154 | 32 | 26 | 247 | 103 | 548 | 521 | 54 | 196 | 64 | 65 | 10 |
| Escambia | 494 | 4466 | 165 | 26 | 266 | 87 | 1131 | 851 | 43 | 46 | 0 | 93 | 77 |
| Flagler | 50 | 463 | 50 | 24 | 9 | 19 | 57 | 94 | 69 | 85 | 37 | 85 | 29 |
| Franklin | 71 | 24 | 121 | 1 | 24 | 2 | 23 | 30 | 52 | 45 | 0 | 31 | 8 |
| Gadsden | 177 | 656 | 564 | 12 | 102 | 9 | 63 | 90 | 239 | 118 | 2 | 12 | 12 |
| Gilchrist | 133 | 407 | 536 | 4 | 6 | 14 | 25 | 17 | 11 | 32 | 4 | 325 | 35 |
| Glades | 56 | 117 | 154 | 6 | 2 | 6 | 16 | 15 | 11 | 24 | 14 | 76 | 11 |
| Gulf | 71 | 174 | 175 | 9 | 28 | 4 | 29 | 61 | 116 | 144 | 0 | 109 | 40 |
| Hamilton | 60 | 290 | 174 | 0 | 20 | 16 | 134 | 54 | 47 | 25 | 9 | 140 | 63 |
| Hardee | 22 | 24 | 32 | 36 | 11 | 30 | 17 | 29 | 70 | 97 | 52 | 26 | 6 |
| Hendry | 116 | 534 | 236 | 37 | 14 | 16 | 37 | 42 | 45 | 55 | 37 | 151 | 11 |
| Hernando | 10 | 10 | 1 | 17 | 11 | 1 | 19 | 84 | 13 | 34 | 101 | 4 | 10 |
| Highlands | 50 | 240 | 14 | 19 | 21 | 56 | 98 | 152 | 35 | 165 | 61 | 74 | 10 |
| Hillsborough | 1616 | 6896 | 435 | 1299 | 678 | 317 | 2189 | 1695 | 4695 | 5142 | 1170 | 193 | 163 |
| Holmes | 65 | 178 | 266 | 11 | 21 | 5 | 8 | 6 | 51 | 57 | 5 | 10 | 3 |
| Indian River | 112 | 1398 | 25 | 3 | 20 | 8 | 65 | 34 | 19 | 11 | 1 | 9 | 2 |
| Jackson | 80 | 157 | 63 | 51 | 63 | 56 | 221 | 353 | 222 | 182 | 437 | 44 | 9 |
| Jefferson | 69 | 36 | 54 | 38 | 43 | 8 | 45 | 222 | 41 | 47 | 205 | 23 | 8 |
| Lafayette | 12 | 21 | 13 | 0 | 10 | 4 | 8 | 4 | 36 | 2 | 0 | 90 | 36 |
| Lake | 113 | 197 | 69 | 13 | 42 | 9 | 35 | 42 | 58 | 84 | 0 | 13 | 3 |
| Lee | 95 | 113 | 120 | 70 | 131 | 101 | 162 | 296 | 436 | 732 | 132 | 184 | 15 |
| Leon | 98 | 1232 | 9 | 219 | 103 | 334 | 226 | 232 | 2418 | 825 | 173 | 123 | 17 |
| Levy | 113 | 227 | 284 | 24 | 52 | 9 | 90 | 114 | 42 | 63 | 85 | 104 | 23 |
| Liberty | 259 | 279 | 978 | 0 | 8 | 0 | 0 | 2 | 42 | 13 | 0 | 32 | 7 |
| Madison | 44 | 125 | 51 | 1 | 14 | 18 | 54 | 20 | 56 | 117 | 0 | 7 | 3 |
| Manatee | 123 | 1567 | 590 | 20 | 140 | 107 | 348 | 483 | 160 | 220 | 227 | 32 | 20 |
| Marion | 217 | 1440 | 38 | 95 | 123 | 640 | 2861 | 449 | 2310 | 742 | 1351 | 15 | 8 |
| Martin | 13 | 19 | 5 | 69 | 26 | 19 | 26 | 70 | 39 | 366 | 12 | 4 | 7 |
| Monroe | 243 | 367 | 169 | 49 | 114 | 111 | 410 | 601 | 301 | 736 | 401 | 185 | 28 |
| Nassau | 276 | 542 | 162 | 55 | 40 | 28 | 172 | 257 | 59 | 64 | 67 | 60 | 12 |
| Okaloosa | 239 | 2681 | 2013 | 29 | 72 | 43 | 383 | 336 | 153 | 58 | 31 | 388 | 31 |
| Okeechobee | 33 | 154 | 17 | 32 | 11 | 6 | 16 | 21 | 115 | 197 | 5 | 0 | 0 |
| Orange | 415 | 716 | 150 | 756 | 368 | 42 | 397 | 479 | 631 | 2656 | 49 | 345 | 4 |
| Osceola | 8 | 20 | 6 | 4 | 4 | 4 | 2 | 17 | 56 | 19 | 40 | 5 | 0 |
| Palm Beach | 633 | 7237 | 900 | 172 | 1016 | 825 | 1110 | 962 | 10536 | 3908 | 291 | 1246 | 144 |
| Pasco | 140 | 550 | 393 | 28 | 55 | 23 | 131 | 138 | 155 | 209 | 1 | 64 | 39 |
| Pinellas | 805 | 8238 | 1482 | 74 | 306 | 1000 | 1612 | 1222 | 473 | 2849 | 761 | 1295 | 345 |
| Polk | 857 | 2858 | 1271 | 462 | 302 | 213 | 935 | 856 | 2210 | 1982 | 514 | 936 | 89 |
| Putnam | 69 | 596 | 710 | 107 | 70 | 60 | 219 | 350 | 329 | 785 | 361 | 266 | 77 |
| St. Johns | 7 | 31 | 0 | 7 | 43 | 5 | 91 | 32 | 31 | 40 | 11 | 35 | 13 |
| St. Lucie | 35 | 156 | 76 | 216 | 109 | 227 | 15 | 112 | 2460 | 1346 | 778 | 0 | 0 |
| Santa Rosa | 79 | 931 | 67 | 6 | 35 | 3 | 73 | 52 | 40 | 55 | 0 | 121 | 24 |
| Sarasota | 139 | 1313 | 9 | 34 | 54 | 292 | 565 | 420 | 397 | 1519 | 500 | 53 | 92 |
| Seminole | 34 | 569 | 8 | 78 | 32 | 48 | 193 | 1311 | 151 | 386 | 80 | 133 | 1 |
| Sumter | 48 | 70 | 49 | 21 | 21 | 7 | 23 | 119 | 77 | 66 | 2 | 79 | 21 |
| Suwannee | 108 | 195 | 164 | 9 | 23 | 13 | 44 | 45 | 110 | 81 | 8 | 90 | 67 |
| Taylor | 46 | 269 | 31 | 15 | 37 | 3 | 96 | 52 | 176 | 121 | 5 | 30 | 3 |
| Union | 80 | 34 | 139 | 0 | 4 | 4 | 2 | 2 | 7 | 1 | 0 | 60 | 4 |
| Volusia | 339 | 5155 | 473 | 221 | 160 | 308 | 566 | 633 | 5037 | 1223 | 1024 | 75 | 168 |
| Wakulla | 63 | 99 | 189 | 39 | 34 | 3 | 47 | 195 | 29 | 29 | 136 | 24 | 1 |
| Walton | 98 | 310 | 144 | 15 | 50 | 5 | 85 | 74 | 136 | 56 | 0 | 3 | 0 |
| Washington | 30 | 25 | 90 | 0 | 21 | 2 | 4 | 11 | 55 | 34 | 0 | 4 | 15 |

## TABLE 18 (Continued)
## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | K. MISCELLANEOUS (Continued) | | | | | | | | | M. NURSING HOMES | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Field Visits | | Office Visits | | General Medical Examinations | Health Cards Issued | Visits in the Interest of Vital Statistics | Conferences or Visits in the Interest of Civil Defense | Visits in the Interest of Reported Accidents Including Poisoning | Nursing Homes Admitted to Service | Visits to Nursing Homes (Field) | Nursing Home Conferences (Office) |
| | Under 65 | Over 65 | Under 65 | Over 65 | | | | | | | | |
| | 2a | 2b | 3a | 3b | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 |
| Total 1965 | 8816 | 5074 | 17236 | 2831 | 114191 | 250094 | 3098 | 1776 | 3590 | 410 | 6576 | 1221 |
| Alachua | 338 | 180 | 225 | 32 | 378 | 3827 | 4 | 4 | 135 | 1 | 21 | 0 |
| Baker | 36 | 6 | 73 | 4 | 5 | 219 | 7 | 3 | 0 | 0 | 0 | 0 |
| Bay | 122 | 15 | 6 | 0 | 119 | 1963 | 74 | 20 | 23 | 2 | 28 | 2 |
| Bradford | 56 | 5 | 19 | 0 | 11 | 341 | 74 | 4 | 5 | 1 | 24 | 7 |
| Brevard | 271 | 159 | 119 | 33 | 75 | 5218 | 55 | 51 | 51 | 4 | 55 | 11 |
| Broward | 268 | 28 | 918 | 5 | 1141 | 26404 | 13 | 2 | 262 | 17 | 490 | 274 |
| Calhoun | 24 | 5 | 103 | 8 | 21 | 160 | 11 | 11 | 0 | 0 | 0 | 0 |
| Charlotte | 114 | 69 | 43 | 13 | 0 | 1329 | 3 | 39 | 3 | 0 | 0 | 5 |
| Citrus | 9 | 15 | 46 | 78 | 67 | 402 | 4 | 41 | 0 | 0 | 0 | 0 |
| Clay | 123 | 29 | 98 | 6 | 32 | 522 | 40 | 19 | 2 | 1 | 1 | 0 |
| Collier | 395 | 35 | 413 | 28 | 92 | 1069 | 12 | 1 | 7 | 1 | 0 | 2 |
| Columbia | 47 | 77 | 8 | 2 | 43 | 328 | 95 | 16 | 1 | 0 | 0 | 0 |
| Dade | 342 | 118 | 3790 | 37 | 101258 | 29126 | 56 | 72 | 446 | 55 | 1074 | 117 |
| DeSoto | 22 | 16 | 9 | 0 | 2 | 415 | 25 | 72 | 0 | 0 | 0 | 0 |
| Dixie | 36 | 0 | 125 | 0 | 88 | 335 | 45 | 6 | 4 | 1 | 14 | 5 |
| Duval | 80 | 14 | 22 | 3 | 52 | 7504 | 0 | 391 | 470 | 41 | 568 | 44 |
| Escambia | 317 | 207 | 39 | 20 | 713 | 11770 | 22 | 30 | 194 | 7 | 74 | 20 |
| Flagler | 50 | 46 | 186 | 117 | 114 | 301 | 26 | 0 | 0 | 0 | 0 | 0 |
| Franklin | 50 | 48 | 28 | 17 | 7 | 1223 | 7 | 0 | 3 | 0 | 0 | 0 |
| Gadsden | 25 | 10 | 18 | 10 | 129 | 934 | 1036 | 6 | 0 | 0 | 0 | 0 |
| Gilchrist | 201 | 28 | 578 | 78 | 51 | 135 | 1 | 2 | 3 | 0 | 0 | 2 |
| Glades | 146 | 24 | 237 | 37 | 0 | 96 | 3 | 0 | 2 | 0 | 0 | 0 |
| Gulf | 50 | 43 | 232 | 99 | 14 | 383 | 420 | 6 | 4 | 0 | 0 | 0 |
| Hamilton | 61 | 125 | 337 | 228 | 0 | 380 | 6 | 1 | 0 | 1 | 3 | 0 |
| Hardee | 8 | 9 | 36 | 3 | 52 | 475 | 2 | 3 | 1 | 3 | 7 | 3 |
| Hendry | 431 | 49 | 336 | 61 | 4 | 398 | 33 | 7 | 17 | 0 | 0 | 0 |
| Hernando | 6 | 10 | 2 | 7 | 177 | 349 | 1 | 0 | 0 | 2 | 5 | 0 |
| Highlands | 77 | 16 | 35 | 3 | 12 | 565 | 11 | 10 | 0 | 3 | 17 | 3 |
| Hillsborough | 304 | 267 | 6 | 2 | 715 | 35865 | 1 | 1 | 583 | 33 | 1161 | 121 |
| Holmes | 11 | 1 | 10 | 2 | 53 | 239 | 7 | 1 | 0 | 1 | 2 | 1 |
| Indian River | 14 | 26 | 4 | 0 | 91 | 1040 | 1 | 3 | 0 | 3 | 5 | 2 |
| Jackson | 28 | 8 | 26 | 4 | 96 | 615 | 21 | 0 | 0 | 0 | 0 | 0 |
| Jefferson | 25 | 9 | 23 | 6 | 63 | 186 | 34 | 0 | 0 | 1 | 34 | 5 |
| Lafayette | 32 | 25 | 154 | 84 | 2 | 29 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lake | 11 | 6 | 6 | 0 | 38 | 1141 | 6 | 0 | 7 | 5 | 16 | 0 |
| Lee | 42 | 30 | 352 | 18 | 486 | 5724 | 6 | 9 | 10 | 4 | 72 | 2 |
| Leon | 275 | 44 | 65 | 7 | 136 | 3171 | 6 | 10 | 75 | 2 | 12 | 8 |
| Levy | 43 | 4 | 102 | 40 | 167 | 625 | 6 | 0 | 1 | 2 | 9 | 6 |
| Liberty | 0 | 0 | 32 | 7 | 68 | 136 | 45 | 1 | 0 | 0 | 0 | 0 |
| Madison | 7 | 6 | 5 | 0 | 5 | 168 | 14 | 18 | 0 | 0 | 0 | 0 |
| Manatee | 38 | 54 | 3 | 0 | 303 | 4711 | 2 | 5 | 128 | 8 | 64 | 1 |
| Marion | 133 | 30 | 2 | 0 | 185 | 2760 | 124 | 38 | 24 | 2 | 7 | 6 |
| Martin | 6 | 3 | 5 | 17 | 0 | 466 | 12 | 77 | 5 | 1 | 14 | 0 |
| Monroe | 65 | 31 | 191 | 15 | 48 | 1680 | 88 | 21 | 59 | 4 | 11 | 2 |
| Nassau | 55 | 13 | 27 | 6 | 32 | 642 | 124 | 84 | 12 | 0 | 0 | 0 |
| Okaloosa | 240 | 16 | 374 | 23 | 18 | 2493 | 44 | 20 | 0 | 0 | 0 | 0 |
| Okeechobee | 0 | 0 | 0 | 0 | 0 | 192 | 0 | 30 | 0 | 1 | 11 | 0 |
| Orange | 214 | 4 | 226 | 9 | 28 | 19608 | 19 | 156 | 166 | 20 | 515 | 149 |
| Osceola | 2 | 0 | 18 | 0 | 8 | 841 | 0 | 0 | 0 | 3 | 20 | 7 |
| Palm Beach | 1098 | 269 | 2686 | 840 | 1236 | 15292 | 96 | 5 | 380 | 19 | 169 | 16 |
| Pasco | 70 | 52 | 44 | 25 | 6 | 2481 | 10 | 8 | 9 | 9 | 117 | 20 |
| Pinellas | 1299 | 1024 | 2022 | 46 | 4761 | 24540 | 51 | 229 | 149 | 80 | 916 | 283 |
| Polk | 384 | 165 | 1127 | 52 | 112 | 10172 | 55 | 20 | 68 | 26 | 267 | 57 |
| Putnam | 29 | 72 | 576 | 264 | 359 | 1114 | 5 | 1 | 4 | 1 | 11 | 0 |
| St. Johns | 12 | 18 | 29 | 6 | 4 | 1573 | 30 | 19 | 18 | 3 | 33 | 7 |
| St. Lucie | 0 | 0 | 0 | 0 | 0 | 1154 | 0 | 55 | 1 | 5 | 21 | 3 |
| Santa Rosa | 103 | 94 | 196 | 52 | 90 | 404 | 2 | 32 | 3 | 0 | 0 | 0 |
| Sarasota | 190 | 436 | 2 | 1 | 0 | 1776 | 22 | 77 | 135 | 5 | 81 | 17 |
| Seminole | 23 | 6 | 269 | 1 | 54 | 930 | 46 | 6 | 19 | 7 | 66 | 0 |
| Sumter | 84 | 26 | 76 | 15 | 3 | 627 | 16 | 5 | 0 | 1 | 5 | 0 |
| Suwannee | 70 | 280 | 301 | 271 | 28 | 322 | 0 | 18 | 0 | 1 | 23 | 1 |
| Taylor | 43 | 5 | 22 | 0 | 1 | 543 | 14 | 0 | 3 | 0 | 0 | 0 |
| Union | 13 | 3 | 66 | 8 | 51 | 57 | 40 | 0 | 0 | 0 | 0 | 0 |
| Volusia | 138 | 560 | 74 | 65 | 0 | 9685 | 54 | 10 | 98 | 22 | 522 | 12 |
| Wakulla | 5 | 0 | 23 | 2 | 41 | 274 | 8 | 0 | 0 | 0 | 0 | 0 |
| Walton | 2 | 0 | 1 | 0 | 57 | 424 | 2 | 0 | 0 | 0 | 0 | 0 |
| Washington | 3 | 101 | 10 | 14 | 189 | 223 | 1 | 0 | 0 | 1 | 11 | 0 |

## TABLE 18 (Continued)
## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | P. SANITATION | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Water | | | | | | Sewage | | | | | |
| | Public Water Systems 1 | | Private Water Plants 2 | | Bottled Water Plant 3 | | Public Sewerage Systems 4 | | Private Sewerage Systems 5 | | New Specification Septic Tank Inst. 6 | |
| | Admitted | Visits | Admitted | Visits | Admitted | Visits | Admitted | Visits | Admitted | Visits | Admitted | Visits |
| Total 1965 | 3256 | 18104 | 8737 | 15163 | 48 | 471 | 1590 | 10993 | 546 | 2134 | 23026 | 36114 |
| Alachua | 125 | 917 | 74 | 186 | 2 | 14 | 62 | 475 | 4 | 5 | 795 | 1156 |
| Baker | 38 | 119 | 15 | 25 | 1 | 1 | 3 | 3 | 0 | 0 | 32 | 46 |
| Bay | 63 | 340 | 129 | 189 | 0 | 0 | 18 | 45 | 9 | 13 | 353 | 415 |
| Bradford | 4 | 15 | 4 | 4 | 0 | 0 | 1 | 19 | 8 | 10 | 136 | 136 |
| Brevard | 128 | 949 | 158 | 312 | 0 | 0 | 45 | 829 | 8 | 58 | 1195 | 1447 |
| Broward | 31 | 590 | 291 | 345 | 2 | 16 | 58 | 883 | 90 | 491 | 1170 | 1534 |
| Calhoun | 5 | 68 | 40 | 43 | 0 | 0 | 1 | 14 | 0 | 0 | 47 | 60 |
| Charlotte | 5 | 64 | 289 | 431 | 0 | 0 | 5 | 63 | 6 | 32 | 342 | 342 |
| Citrus | 28 | 32 | 68 | 70 | 0 | 0 | 2 | 7 | 3 | 5 | 27 | 30 |
| Clay | 81 | 181 | 11 | 67 | 0 | 0 | 1 | 15 | 4 | 33 | 142 | 243 |
| Collier | 21 | 146 | 41 | 61 | 0 | 0 | 12 | 130 | 1 | 2 | 362 | 874 |
| Columbia | 73 | 153 | 23 | 116 | 0 | 0 | 11 | 125 | 6 | 48 | 138 | 459 |
| Dade | 305 | 2524 | 1457 | 2442 | 4 | 98 | 104 | 349 | 116 | 303 | 0 | 0 |
| DeSoto | 20 | 81 | 83 | 111 | 0 | 0 | 1 | 2 | 0 | 0 | 31 | 80 |
| Dixie | 20 | 60 | 21 | 34 | 0 | 0 | 2 | 2 | 1 | 1 | 9 | 10 |
| Duval | 10 | 49 | 165 | 187 | 1 | 13 | 33 | 370 | 24 | 123 | 1116 | 1817 |
| Escambia | 60 | 838 | 606 | 736 | 0 | 0 | 88 | 587 | 0 | 0 | 1726 | 3125 |
| Flagler | 16 | 62 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 1 | 78 | 137 |
| Franklin | 6 | 141 | 11 | 15 | 0 | 0 | 5 | 140 | 7 | 13 | 6 | 12 |
| Gadsden | 21 | 152 | 54 | 106 | 0 | 0 | 9 | 43 | 1 | 3 | 83 | 141 |
| Gilchrist | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 313 |
| Glades | 3 | 98 | 2 | 13 | 0 | 0 | 1 | 6 | 2 | 4 | 65 | 133 |
| Gulf | 11 | 58 | 93 | 167 | 0 | 0 | 2 | 13 | 0 | 0 | 52 | 103 |
| Hamilton | 7 | 88 | 6 | 7 | 0 | 0 | 9 | 67 | 1 | 2 | 26 | 102 |
| Hardee | 20 | 126 | 48 | 130 | 0 | 0 | 1 | 16 | 9 | 28 | 106 | 261 |
| Hendry | 3 | 65 | 0 | 0 | 0 | 0 | 4 | 18 | 1 | 7 | 104 | 212 |
| Hernando | 35 | 76 | 70 | 81 | 1 | 1 | 12 | 14 | 7 | 15 | 21 | 25 |
| Highlands | 29 | 31 | 147 | 171 | 0 | 0 | 23 | 36 | 11 | 15 | 235 | 373 |
| Hillsborough | 238 | 893 | 272 | 356 | 12 | 15 | 106 | 984 | 3 | 23 | 1548 | 1601 |
| Holmes | 8 | 36 | 19 | 25 | 0 | 0 | 3 | 20 | 0 | 0 | 23 | 27 |
| Indian River | 1 | 5 | 1 | 2 | 1 | 7 | 1 | 4 | 5 | 12 | 20 | 27 |
| Jackson | 11 | 92 | 39 | 192 | 0 | 0 | 6 | 24 | 0 | 0 | 66 | 114 |
| Jefferson | 4 | 8 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 6 | 14 |
| Lafayette | 11 | 33 | 10 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 |
| Lake | 44 | 70 | 129 | 184 | 0 | 0 | 1 | 2 | 2 | 2 | 551 | 1228 |
| Lee | 21 | 57 | 0 | 0 | 1 | 1 | 10 | 76 | 0 | 0 | 1332 | 1333 |
| Leon | 228 | 328 | 172 | 215 | 1 | 2 | 8 | 20 | 0 | 0 | 350 | 395 |
| Levy | 41 | 76 | 68 | 149 | 0 | 0 | 1 | 4 | 1 | 1 | 133 | 145 |
| Liberty | 26 | 303 | 6 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Madison | 19 | 111 | 25 | 33 | 0 | 0 | 2 | 10 | 0 | 0 | 16 | 28 |
| Manatee | 253 | 561 | 743 | 915 | 3 | 59 | 84 | 504 | 0 | 0 | 417 | 522 |
| Marion | 30 | 122 | 73 | 87 | 0 | 0 | 11 | 57 | 6 | 22 | 738 | 836 |
| Martin | 38 | 216 | 87 | 174 | 1 | 3 | 9 | 268 | 0 | 0 | 379 | 818 |
| Monroe | 1 | 27 | 3 | 12 | 1 | 1 | 28 | 98 | 2 | 2 | 39 | 86 |
| Nassau | 2 | 4 | 2 | 15 | 0 | 0 | 1 | 8 | 0 | 0 | 118 | 287 |
| Okaloosa | 20 | 37 | 10 | 18 | 0 | 0 | 9 | 34 | 8 | 25 | 425 | 674 |
| Okeechobee | 7 | 32 | 2 | 3 | 0 | 0 | 6 | 44 | 0 | 0 | 71 | 166 |
| Orange | 121 | 1622 | 69 | 340 | 2 | 57 | 137 | 1435 | 50 | 336 | 1065 | 1692 |
| Osceola | 7 | 31 | 4 | 40 | 2 | 17 | 3 | 11 | 6 | 32 | 89 | 166 |
| Palm Beach | 16 | 623 | 1002 | 1406 | 4 | 67 | 3 | 6 | 2 | 4 | 1166 | 1801 |
| Pasco | 23 | 60 | 20 | 45 | 2 | 8 | 7 | 14 | 0 | 0 | 1030 | 1350 |
| Pinellas | 119 | 1211 | 140 | 248 | 2 | 25 | 391 | 2061 | 68 | 184 | 848 | 1334 |
| Polk | 258 | 537 | 304 | 497 | 0 | 0 | 104 | 324 | 38 | 178 | 1047 | 1517 |
| Putnam | 45 | 219 | 84 | 173 | 0 | 0 | 4 | 6 | 4 | 22 | 302 | 888 |
| St. Johns | 13 | 50 | 76 | 120 | 0 | 0 | 7 | 13 | 11 | 14 | 42 | 66 |
| St. Lucie | 17 | 286 | 148 | 201 | 1 | 14 | 7 | 120 | 0 | 0 | 296 | 508 |
| Santa Rosa | 8 | 11 | 53 | 54 | 0 | 0 | 1 | 10 | 1 | 1 | 108 | 109 |
| Sarasota | 197 | 719 | 1058 | 2988 | 2 | 13 | 66 | 280 | 7 | 13 | 842 | 2301 |
| Seminole | 25 | 260 | 33 | 135 | 0 | 0 | 8 | 126 | 0 | 0 | 562 | 724 |
| Sumter | 24 | 481 | 15 | 129 | 0 | 0 | 5 | 27 | 1 | 3 | 67 | 101 |
| Suwannee | 1 | 6 | 0 | 0 | 0 | 0 | 5 | 7 | 0 | 0 | 55 | 66 |
| Taylor | 27 | 71 | 99 | 179 | 0 | 0 | 0 | 0 | 1 | 1 | 18 | 25 |
| Union | 2 | 41 | 4 | 29 | 0 | 0 | 3 | 14 | 0 | 0 | 38 | 68 |
| Volusia | 163 | 761 | 51 | 96 | 2 | 39 | 30 | 93 | 10 | 47 | 660 | 1365 |
| Wakulla | 7 | 16 | 5 | 8 | 0 | 0 | 1 | 1 | 0 | 0 | 18 | 21 |
| Walton | 7 | 12 | 0 | 0 | 0 | 0 | 2 | 8 | 0 | 0 | 68 | 72 |
| Washington | 5 | 53 | 5 | 22 | 0 | 0 | 2 | 2 | 0 | 0 | 39 | 45 |

## TABLE 18 (Continued)
## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | P. SANITATION (Continued) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sewage | | Miscellaneous | | | | | | | | | |
| | New Specification Privies Installed 7 | | Garbage Disposal Systems 8 | | Subdivision Analysis 9 | Percolation & Soil Log Test 10 | Pollution Survey 11 | | Bathing Areas Surveyed 12 | | Public Swimming Pools 13 | |
| | Admitted | Visits | Admitted | Visits | Number | Number | Admitted | Visits | Admitted | Visits | Admitted | Visits |
| Total 1965 | 476 | 575 | 441 | 5852 | 375 | 13146 | 444 | 4445 | 333 | 1376 | 3638 | 19097 |
| Alachua | 1 | 2 | 17 | 281 | 21 | 1347 | 11 | 15 | 21 | 28 | 37 | 188 |
| Baker | 0 | 0 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Bay | 0 | 0 | 1 | 1 | 1 | 153 | 2 | 11 | 2 | 9 | 72 | 540 |
| Bradford | 0 | 0 | 6 | 188 | 0 | 0 | 2 | 4 | 1 | 4 | 2 | 3 |
| Brevard | 2 | 4 | 4 | 69 | 123 | 2558 | 23 | 119 | 25 | 112 | 22 | 293 |
| Broward | 5 | 14 | 18 | 152 | 50 | 29 | 24 | 157 | 0 | 0 | 1127 | 3597 |
| Calhoun | 0 | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Charlotte | 0 | 0 | 5 | 64 | 0 | 57 | 8 | 43 | 3 | 13 | 3 | 24 |
| Citrus | 4 | 5 | 5 | 5 | 2 | 2 | 2 | 5 | 0 | 0 | 1 | 1 |
| Clay | 0 | 0 | 1 | 19 | 10 | 583 | 10 | 12 | 1 | 2 | 1 | 3 |
| Collier | 9 | 10 | 3 | 8 | 3 | 26 | 6 | 12 | 0 | 0 | 59 | 109 |
| Columbia | 0 | 0 | 2 | 129 | 14 | 63 | 1 | 6 | 0 | 0 | 5 | 5 |
| Dade | 0 | 0 | 52 | 263 | 0 | 1 | 44 | 2364 | 31 | 335 | 980 | 4858 |
| DeSoto | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 10 | 0 | 0 | 1 | 2 |
| Dixie | 0 | 0 | 4 | 8 | 0 | 31 | 1 | 15 | 0 | 0 | 0 | 0 |
| Duval | 0 | 0 | 21 | 148 | 15 | 2426 | 21 | 78 | 1 | 2 | 0 | 0 |
| Escambia | 16 | 34 | 6 | 1841 | 4 | 188 | 0 | 0 | 5 | 21 | 32 | 817 |
| Flagler | 0 | 0 | 5 | 56 | 0 | 0 | 2 | 37 | 1 | 1 | 0 | 0 |
| Franklin | 0 | 0 | 6 | 196 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Gadsden | 128 | 132 | 4 | 97 | 0 | 14 | 10 | 17 | 0 | 0 | 0 | 0 |
| Gilchrist | 0 | 0 | 1 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Glades | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gulf | 0 | 0 | 1 | 1 | 0 | 5 | 0 | 0 | 1 | 3 | 0 | 0 |
| Hamilton | 0 | 0 | 3 | 68 | 0 | 34 | 1 | 1 | 0 | 0 | 2 | 10 |
| Hardee | 0 | 0 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 10 |
| Hendry | 0 | 0 | 1 | 22 | 2 | 1 | 1 | 11 | 3 | 15 | 3 | 4 |
| Hernando | 0 | 0 | 18 | 28 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Highlands | 1 | 1 | 5 | 26 | 3 | 0 | 0 | 0 | 0 | 0 | 4 | 9 |
| Hillsborough | 16 | 23 | 34 | 403 | 10 | 159 | 45 | 189 | 51 | 129 | 86 | 1071 |
| Holmes | 0 | 0 | 3 | 29 | 0 | 78 | 0 | 0 | 0 | 0 | 0 | 0 |
| Indian River | 0 | 0 | 1 | 1 | 2 | 13 | 2 | 19 | 2 | 5 | 2 | 8 |
| Jackson | 0 | 0 | 3 | 32 | 0 | 49 | 1 | 1 | 0 | 0 | 2 | 9 |
| Jefferson | 0 | 0 | 4 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 13 |
| Lafayette | 0 | 0 | 2 | 5 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lake | 0 | 0 | 1 | 2 | 0 | 32 | 1 | 1 | 3 | 8 | 3 | 7 |
| Lee | 0 | 0 | 4 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 142 |
| Leon | 0 | 0 | 6 | 95 | 0 | 124 | 0 | 0 | 15 | 111 | 29 | 95 |
| Levy | 0 | 0 | 7 | 18 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| Liberty | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Madison | 0 | 0 | 5 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 5 |
| Manatee | 6 | 6 | 4 | 45 | 1 | 15 | 3 | 4 | 1 | 3 | 20 | 84 |
| Marion | 23 | 25 | 39 | 240 | 0 | 161 | 2 | 3 | 13 | 32 | 25 | 43 |
| Martin | 0 | 0 | 3 | 12 | 0 | 415 | 7 | 66 | 0 | 0 | 12 | 38 |
| Monroe | 0 | 0 | 8 | 34 | 2 | 0 | 5 | 15 | 5 | 5 | 13 | 33 |
| Nassau | 0 | 0 | 2 | 21 | 0 | 12 | 2 | 50 | 3 | 4 | 23 | 30 |
| Okaloosa | 0 | 0 | 6 | 52 | 2 | 148 | 3 | 14 | 22 | 46 | 20 | 82 |
| Okeechobee | 1 | 1 | 2 | 5 | 0 | 33 | 0 | 0 | 2 | 2 | 1 | 15 |
| Orange | 2 | 2 | 5 | 172 | 6 | 1509 | 159 | 782 | 17 | 244 | 21 | 684 |
| Osceola | 0 | 0 | 4 | 83 | 1 | 25 | 0 | 0 | 0 | 0 | 1 | 4 |
| Palm Beach | 1 | 5 | 10 | 16 | 0 | 4 | 1 | 26 | 2 | 2 | 279 | 2871 |
| Pasco | 2 | 4 | 4 | 21 | 0 | 22 | 1 | 2 | 3 | 3 | 3 | 6 |
| Pinellas | 0 | 0 | 15 | 86 | 5 | 1406 | 7 | 103 | 10 | 46 | 286 | 1828 |
| Polk | 5 | 22 | 13 | 99 | 14 | 393 | 4 | 55 | 33 | 95 | 39 | 117 |
| Putnam | 0 | 0 | 11 | 183 | 2 | 45 | 0 | 0 | 3 | 5 | 6 | 31 |
| St. Johns | 0 | 0 | 2 | 2 | 0 | 84 | 6 | 23 | 0 | 0 | 37 | 67 |
| St. Lucie | 1 | 1 | 3 | 25 | 1 | 146 | 2 | 3 | 0 | 0 | 19 | 144 |
| Santa Rosa | 0 | 0 | 10 | 60 | 0 | 3 | 2 | 3 | 2 | 4 | 0 | 0 |
| Sarasota | 243 | 265 | 4 | 8 | 68 | 219 | 12 | 79 | 8 | 16 | 109 | 280 |
| Seminole | 0 | 0 | 5 | 79 | 3 | 382 | 1 | 10 | 37 | 46 | 12 | 29 |
| Sumter | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 1 | 9 | 2 | 10 |
| Suwannee | 5 | 5 | 1 | 1 | 0 | 28 | 0 | 0 | 0 | 0 | 4 | 6 |
| Taylor | 1 | 1 | 5 | 36 | 0 | 15 | 0 | 0 | 0 | 0 | 14 | 35 |
| Union | 3 | 12 | 4 | 55 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volusia | 0 | 0 | 9 | 51 | 3 | 33 | 5 | 71 | 4 | 14 | 183 | 816 |
| Wakulla | 0 | 0 | 3 | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Walton | 0 | 0 | 3 | 13 | 0 | 45 | 2 | 9 | 1 | 2 | 3 | 8 |
| Washington | 1 | 1 | 2 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 |

## TABLE 18 (Continued)
## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | P. SANITATION (Continued) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Miscellaneous | | | | | | | | | | | |
| | Schools 14 | | Mobile Home Parks 15 | | Camps 16 | | Tourist Courts or Motels 17 | | Child Care Centers 18 | | Complaints Investigated 19 | |
| | Admitted | Visits | Admitted | Visits | Admitted | Visits | Admitted | Visits | Admitted | Visits | Admitted | Visits |
| Total 1965 | 1748 | 4893 | 1794 | 9519 | 701 | 4776 | 400 | 860 | 1693 | 5605 | 43227 | 92272 |
| Alachua | 33 | 100 | 36 | 156 | 39 | 88 | 43 | 53 | 12 | 47 | 543 | 927 |
| Baker | 7 | 70 | 4 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 22 |
| Bay | 32 | 51 | 58 | 174 | 2 | 46 | 15 | 62 | 0 | 0 | 164 | 260 |
| Bradford | 6 | 11 | 1 | 1 | 2 | 2 | 5 | 8 | 0 | 0 | 80 | 91 |
| Brevard | 42 | 86 | 59 | 497 | 8 | 44 | 12 | 66 | 17 | 34 | 1418 | 2534 |
| Broward | 128 | 281 | 107 | 270 | 6 | 32 | 1 | 1 | 173 | 503 | 4467 | 7566 |
| Calhoun | 5 | 41 | 2 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 15 |
| Charlotte | 8 | 31 | 19 | 88 | 1 | 7 | 8 | 20 | 1 | 2 | 417 | 764 |
| Citrus | 10 | 24 | 8 | 21 | 2 | 2 | 5 | 6 | 0 | 0 | 44 | 46 |
| Clay | 4 | 16 | 3 | 12 | 2 | 13 | 1 | 2 | 1 | 5 | 20 | 131 |
| Collier | 10 | 24 | 33 | 66 | 142 | 272 | 0 | 0 | 4 | 5 | 298 | 700 |
| Columbia | 5 | 5 | 1 | 2 | 0 | 0 | 1 | 1 | 2 | 3 | 36 | 41 |
| Dade | 215 | 401 | 73 | 299 | 51 | 1877 | 0 | 0 | 231 | 553 | 9810 | 24599 |
| DeSoto | 6 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 7 | 68 | 233 |
| Dixie | 5 | 10 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 11 | 15 |
| Duval | 69 | 90 | 89 | 226 | 14 | 36 | 0 | 0 | 226 | 284 | 2814 | 5088 |
| Escambia | 98 | 211 | 97 | 267 | 2 | 11 | 0 | 0 | 81 | 573 | 3153 | 6289 |
| Flagler | 4 | 11 | 13 | 86 | 1 | 8 | 5 | 13 | 0 | 0 | 14 | 23 |
| Franklin | 4 | 73 | 5 | 93 | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 75 |
| Gadsden | 16 | 128 | 8 | 31 | 4 | 30 | 6 | 48 | 2 | 19 | 209 | 252 |
| Gilchrist | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| Glades | 2 | 8 | 0 | 0 | 5 | 40 | 3 | 6 | 1 | 2 | 16 | 28 |
| Gulf | 8 | 22 | 6 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 88 |
| Hamilton | 4 | 4 | 6 | 22 | 0 | 0 | 1 | 1 | 0 | 0 | 16 | 21 |
| Hardee | 2 | 5 | 7 | 22 | 6 | 40 | 0 | 0 | 1 | 1 | 23 | 53 |
| Hendry | 3 | 43 | 2 | 30 | 10 | 147 | 3 | 12 | 0 | 0 | 36 | 85 |
| Hernando | 9 | 16 | 3 | 4 | 3 | 8 | 3 | 5 | 1 | 2 | 50 | 83 |
| Highlands | 4 | 5 | 34 | 98 | 20 | 25 | 1 | 1 | 3 | 3 | 99 | 149 |
| Hillsborough | 134 | 348 | 105 | 425 | 11 | 240 | 2 | 9 | 209 | 1351 | 2975 | 6049 |
| Holmes | 8 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 11 | 13 |
| Indian River | 5 | 13 | 2 | 5 | 1 | 9 | 0 | 0 | 1 | 1 | 46 | 159 |
| Jackson | 2 | 6 | 4 | 8 | 1 | 6 | 2 | 5 | 0 | 0 | 8 | 45 |
| Jefferson | 8 | 10 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 40 |
| Lafayette | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| Lake | 9 | 9 | 16 | 46 | 8 | 14 | 8 | 8 | 7 | 20 | 229 | 396 |
| Lee | 35 | 52 | 17 | 31 | 10 | 163 | 1 | 1 | 32 | 73 | 238 | 391 |
| Leon | 29 | 58 | 46 | 102 | 20 | 48 | 58 | 92 | 46 | 106 | 388 | 815 |
| Levy | 10 | 17 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | 1 | 15 | 18 |
| Liberty | 3 | 8 | 0 | 0 | 3 | 3 | 0 | 0 | 1 | 1 | 1 | 1 |
| Madison | 7 | 8 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 11 | 18 |
| Manatee | 33 | 158 | 41 | 134 | 15 | 116 | 8 | 10 | 20 | 30 | 886 | 1774 |
| Marion | 41 | 107 | 36 | 99 | 18 | 42 | 38 | 69 | 8 | 11 | 621 | 776 |
| Martin | 11 | 13 | 19 | 74 | 1 | 1 | 0 | 0 | 6 | 48 | 118 | 287 |
| Monroe | 5 | 15 | 42 | 128 | 8 | 19 | 5 | 9 | 6 | 9 | 342 | 511 |
| Nassau | 10 | 32 | 3 | 19 | 2 | 5 | 3 | 15 | 0 | 0 | 40 | 103 |
| Okaloosa | 22 | 84 | 82 | 228 | 1 | 4 | 2 | 3 | 2 | 3 | 304 | 583 |
| Okeechobee | 4 | 8 | 20 | 102 | 0 | 0 | 0 | 0 | 1 | 2 | 29 | 59 |
| Orange | 131 | 845 | 35 | 1026 | 10 | 72 | 99 | 196 | 146 | 519 | 1169 | 5411 |
| Osceola | 8 | 14 | 8 | 24 | 4 | 20 | 3 | 9 | 3 | 7 | 83 | 175 |
| Palm Beach | 89 | 207 | 71 | 213 | 181 | 774 | 11 | 16 | 149 | 425 | 2338 | 4580 |
| Pasco | 4 | 23 | 18 | 51 | 11 | 87 | 2 | 5 | 0 | 0 | 215 | 414 |
| Pinellas | 122 | 315 | 280 | 2990 | 4 | 47 | 0 | 0 | 20 | 43 | 6174 | 12658 |
| Polk | 98 | 220 | 55 | 292 | 32 | 138 | 18 | 45 | 114 | 582 | 843 | 2082 |
| Putnam | 13 | 49 | 48 | 306 | 5 | 64 | 0 | 0 | 9 | 11 | 218 | 441 |
| St. Johns | 20 | 32 | 4 | 12 | 1 | 1 | 1 | 1 | 2 | 2 | 77 | 124 |
| St. Lucie | 9 | 11 | 29 | 330 | 6 | 62 | 0 | 0 | 10 | 36 | 135 | 242 |
| Santa Rosa | 1 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 34 |
| Sarasota | 21 | 38 | 60 | 100 | 8 | 33 | 1 | 1 | 28 | 96 | 802 | 1527 |
| Seminole | 12 | 171 | 7 | 27 | 4 | 16 | 0 | 0 | 19 | 30 | 166 | 485 |
| Sumter | 12 | 25 | 5 | 42 | 3 | 12 | 5 | 15 | 0 | 0 | 24 | 52 |
| Suwannee | 0 | 0 | 3 | 23 | 0 | 0 | 3 | 17 | 4 | 16 | 19 | 36 |
| Taylor | 6 | 12 | 7 | 7 | 0 | 0 | 6 | 6 | 3 | 3 | 30 | 36 |
| Union | 2 | 17 | 0 | 0 | 1 | 3 | 1 | 1 | 0 | 0 | 22 | 27 |
| Volusia | 54 | 98 | 47 | 153 | 8 | 42 | 3 | 8 | 84 | 135 | 590 | 1645 |
| Wakulla | 5 | 11 | 1 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 13 | 25 |
| Walton | 15 | 21 | 3 | 11 | 2 | 5 | 0 | 0 | 0 | 0 | 19 | 23 |
| Washington | 8 | 32 | 1 | 1 | 0 | 0 | 4 | 11 | 0 | 0 | 29 | 31 |

## TABLE 18 (Continued)

## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | P. SANITATION (Continued) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Miscellaneous (Continued) | | | | | Protection of Food and Milk | | | | | | | |
| | Nuisances Corrected 20 | Plumbing 21 | | Rabies Animal Bites 22 | | Eating and Drinking Establishments 23 | | Food Processing Plants 24 | | Abattoirs 25 | | Shellfish and Crustacea 26 | |
| | Number | Admitted | Visits | Admitted | Visits | Admitted | Visits | Admitted | Visits | Admitted | Visits | Admitted | Visits |
| Total 1965 | 29493 | 2407 | 7878 | 24792 | 71513 | 21002 | 118133 | 1010 | 5374 | 166 | 1166 | 205 | 1220 |
| Alachua | 454 | 0 | 149 | 621 | 694 | 407 | 1619 | 27 | 99 | 4 | 15 | 1 | 4 |
| Baker | 8 | 0 | 14 | 22 | 32 | 19 | 211 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bay | 83 | 0 | 0 | 117 | 231 | 311 | 975 | 5 | 13 | 0 | 0 | 19 | 104 |
| Bradford | 57 | 0 | 0 | 68 | 73 | 40 | 309 | 0 | 0 | 0 | 0 | 0 | 0 |
| Brevard | 660 | 0 | 14 | 981 | 2019 | 566 | 2548 | 9 | 54 | 7 | 19 | 7 | 43 |
| Broward | 2247 | 0 | 0 | 1928 | 4627 | 1479 | 4440 | 35 | 158 | 1 | 1 | 0 | 0 |
| Calhoun | 13 | 0 | 0 | 3 | 5 | 30 | 254 | 0 | 0 | 0 | 0 | 0 | 0 |
| Charlotte | 314 | 0 | 0 | 48 | 112 | 82 | 391 | 9 | 43 | 0 | 0 | 5 | 89 |
| Citrus | 8 | 0 | 0 | 8 | 12 | 47 | 90 | 0 | 0 | 0 | 0 | 6 | 12 |
| Clay | 33 | 0 | 3 | 17 | 95 | 56 | 329 | 1 | 11 | 0 | 0 | 0 | 0 |
| Collier | 190 | 0 | 1 | 99 | 311 | 110 | 263 | 15 | 29 | 1 | 2 | 2 | 5 |
| Columbia | 20 | 0 | 0 | 59 | 109 | 107 | 466 | 3 | 3 | 0 | 0 | 0 | 0 |
| Dade | 4053 | 0 | 0 | 5758 | 19971 | 4078 | 27975 | 187 | 1262 | 59 | 419 | 1 | 40 |
| DeSoto | 36 | 0 | 0 | 30 | 72 | 31 | 102 | 9 | 26 | 1 | 1 | 0 | 0 |
| Dixie | 6 | 0 | 0 | 6 | 7 | 27 | 47 | 1 | 1 | 0 | 0 | 2 | 33 |
| Duval | 2569 | 0 | 0 | 1561 | 1561 | 665 | 1893 | 36 | 78 | 1 | 1 | 1 | 2 |
| Escambia | 2807 | 2407 | 7404 | 1388 | 5192 | 667 | 3854 | 33 | 282 | 2 | 9 | 6 | 64 |
| Flagler | 1 | 0 | 0 | 18 | 49 | 62 | 170 | 2 | 8 | 0 | 0 | 0 | 0 |
| Franklin | 38 | 0 | 0 | 19 | 44 | 27 | 198 | 2 | 10 | 0 | 0 | 0 | 0 |
| Gadsden | 152 | 0 | 2 | 15 | 28 | 71 | 508 | 3 | 16 | 1 | 9 | 1 | 5 |
| Gilchrist | 4 | 0 | 0 | 15 | 21 | 6 | 206 | 0 | 0 | 0 | 0 | 0 | 0 |
| Glades | 6 | 0 | 0 | 16 | 44 | 24 | 75 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gulf | 24 | 0 | 0 | 28 | 75 | 46 | 414 | 0 | 0 | 0 | 0 | 1 | 3 |
| Hamilton | 0 | 0 | 0 | 8 | 24 | 35 | 265 | 0 | 0 | 2 | 8 | 0 | 0 |
| Hardee | 15 | 0 | 0 | 30 | 51 | 18 | 75 | 0 | 0 | 4 | 15 | 0 | 0 |
| Hendry | 7 | 0 | 5 | 24 | 81 | 22 | 106 | 1 | 1 | 0 | 0 | 0 | 0 |
| Hernando | 16 | 0 | 2 | 9 | 25 | 41 | 66 | 7 | 11 | 0 | 0 | 0 | 0 |
| Highlands | 38 | 0 | 0 | 91 | 118 | 85 | 252 | 1 | 1 | 0 | 0 | 1 | 1 |
| Hillsborough | 4331 | 0 | 0 | 3242 | 15792 | 1950 | 20763 | 81 | 828 | 41 | 483 | 2 | 77 |
| Holmes | 3 | 0 | 0 | 4 | 4 | 58 | 299 | 1 | 10 | 0 | 0 | 0 | 0 |
| Indian River | 16 | 0 | 0 | 38 | 110 | 89 | 198 | 1 | 4 | 0 | 0 | 2 | 10 |
| Jackson | 2 | 0 | 0 | 20 | 59 | 107 | 465 | 4 | 7 | 9 | 11 | 0 | 0 |
| Jefferson | 10 | 0 | 0 | 18 | 29 | 10 | 29 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lafayette | 2 | 0 | 0 | 9 | 9 | 5 | 20 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lake | 128 | 0 | 0 | 48 | 65 | 155 | 774 | 4 | 11 | 0 | 0 | 0 | 0 |
| Lee | 139 | 0 | 0 | 227 | 410 | 425 | 1656 | 30 | 76 | 0 | 0 | 8 | 46 |
| Leon | 207 | 0 | 0 | 455 | 1314 | 345 | 1879 | 6 | 26 | 4 | 28 | 0 | 0 |
| Levy | 14 | 0 | 0 | 53 | 101 | 35 | 41 | 0 | 0 | 0 | 0 | 23 | 107 |
| Liberty | 0 | 0 | 0 | 1 | 1 | 9 | 84 | 0 | 0 | 0 | 0 | 0 | 0 |
| Madison | 5 | 0 | 0 | 10 | 19 | 39 | 63 | 0 | 0 | 0 | 0 | 0 | 0 |
| Manatee | 823 | 0 | 0 | 422 | 902 | 294 | 937 | 40 | 226 | 1 | 6 | 2 | 13 |
| Marion | 411 | 0 | 0 | 166 | 263 | 274 | 745 | 3 | 73 | 2 | 6 | 0 | 0 |
| Martin | 90 | 0 | 0 | 49 | 123 | 86 | 415 | 2 | 8 | 0 | 0 | 1 | 4 |
| Monroe | 202 | 0 | 16 | 178 | 383 | 226 | 375 | 2 | 4 | 1 | 1 | 3 | 3 |
| Nassau | 19 | 0 | 0 | 27 | 63 | 50 | 199 | 3 | 4 | 0 | 0 | 3 | 13 |
| Okaloosa | 200 | 0 | 0 | 319 | 510 | 191 | 800 | 1 | 3 | 1 | 1 | 3 | 5 |
| Okeechobee | 19 | 0 | 0 | 27 | 56 | 64 | 366 | 0 | 0 | 1 | 1 | 0 | 0 |
| Orange | 974 | 0 | 80 | 1386 | 2822 | 1009 | 6651 | 105 | 511 | 1 | 4 | 0 | 0 |
| Osceola | 10 | 0 | 0 | 68 | 149 | 32 | 90 | 2 | 4 | 0 | 0 | 0 | 0 |
| Palm Beach | 1114 | 0 | 0 | 545 | 1194 | 1259 | 5726 | 28 | 131 | 0 | 0 | 0 | 0 |
| Pasco | 99 | 0 | 3 | 61 | 125 | 206 | 637 | 5 | 18 | 2 | 2 | 3 | 5 |
| Pinellas | 4799 | 0 | 0 | 1545 | 3020 | 1706 | 10519 | 101 | 516 | 2 | 19 | 4 | 67 |
| Polk | 618 | 0 | 144 | 1262 | 3806 | 728 | 4749 | 49 | 267 | 5 | 32 | 0 | 0 |
| Putnam | 47 | 0 | 0 | 32 | 66 | 134 | 1110 | 3 | 11 | 1 | 4 | 1 | 13 |
| St. Johns | 66 | 0 | 0 | 99 | 176 | 216 | 587 | 10 | 22 | 0 | 0 | 18 | 122 |
| St. Lucie | 135 | 0 | 0 | 138 | 433 | 203 | 2332 | 10 | 107 | 1 | 6 | 0 | 0 |
| Santa Rosa | 8 | 0 | 0 | 86 | 124 | 47 | 213 | 0 | 0 | 0 | 0 | 9 | 15 |
| Sarasota | 618 | 0 | 6 | 522 | 1730 | 407 | 912 | 69 | 114 | 1 | 1 | 13 | 139 |
| Seminole | 108 | 0 | 0 | 291 | 631 | 154 | 446 | 18 | 85 | 0 | 0 | 0 | 0 |
| Sumter | 17 | 0 | 0 | 19 | 58 | 40 | 173 | 0 | 0 | 1 | 11 | 0 | 0 |
| Suwannee | 15 | 0 | 0 | 3 | 5 | 62 | 657 | 1 | 2 | 3 | 11 | 0 | 0 |
| Taylor | 17 | 0 | 0 | 57 | 78 | 64 | 112 | 1 | 4 | 0 | 0 | 1 | 10 |
| Union | 13 | 0 | 0 | 15 | 31 | 19 | 122 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volusia | 334 | 0 | 35 | 308 | 1082 | 975 | 4040 | 38 | 188 | 4 | 34 | 15 | 31 |
| Wakulla | 3 | 0 | 0 | 11 | 14 | 32 | 58 | 1 | 1 | 0 | 0 | 36 | 108 |
| Walton | 9 | 0 | 0 | 25 | 50 | 77 | 532 | 1 | 2 | 1 | 3 | 5 | 27 |
| Washington | 9 | 0 | 0 | 19 | 23 | 61 | 258 | 4 | 5 | 1 | 3 | 0 | 0 |

## TABLE 18 (Continued)

## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | P. SANITATION (Continued) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Protection of Food and Milk (Continued) | | | | | | | | | | | |
| | Grocery and Meat Markets 27 | | Other Food Establishments 28 | | Food Handlers Trained 29 | Dairy Farms 30 | | Milk and Milk Products Plants 31 | | Cows Bangs Tested 32 | Cows Tuberculin Tested 33 | Dairy Farms Under Mastitis Control Program 34 |
| | Admitted | Visits | Admitted | Visits | Number | Admitted | Visits | Admitted | Visits | Number | Number | Number |
| Total 1965 | 7157 | 42297 | 1530 | 9036 | 4542 | 601 | 9662 | 362 | 7494 | 10116 | 74495 | 256 |
| Alachua | 206 | 810 | 25 | 60 | 355 | 7 | 157 | 3 | 55 | 0 | 1123 | 10 |
| Baker | 32 | 280 | 0 | 0 | 0 | 3 | 16 | 0 | 0 | 0 | 0 | 0 |
| Bay | 75 | 186 | 8 | 31 | 0 | 3 | 27 | 2 | 8 | 0 | 47 | 0 |
| Bradford | 19 | 199 | 0 | 0 | 0 | 2 | 19 | 2 | 19 | 0 | 0 | 0 |
| Brevard | 102 | 640 | 12 | 44 | 126 | 2 | 17 | 3 | 41 | 0 | 2843 | 0 |
| Broward | 470 | 1559 | 19 | 31 | 156 | 1 | 3 | 10 | 110 | 0 | 0 | 0 |
| Calhoun | 16 | 65 | 0 | 0 | 0 | 9 | 178 | 0 | 0 | 0 | 0 | 0 |
| Charlotte | 34 | 127 | 0 | 0 | 207 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Citrus | 12 | 17 | 7 | 9 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 |
| Clay | 38 | 202 | 0 | 0 | 1 | 8 | 101 | 1 | 13 | 194 | 22 | 0 |
| Collier | 20 | 33 | 2 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Columbia | 3 | 35 | 2 | 3 | 0 | 0 | 0 | 1 | 22 | 0 | 0 | 0 |
| Dade | 1269 | 7504 | 728 | 3261 | 2763 | 55 | 643 | 129 | 3391 | 0 | 1174 | 0 |
| DeSoto | 7 | 26 | 5 | 17 | 0 | 1 | 19 | 0 | 0 | 0 | 1 | 0 |
| Dixie | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Duval | 311 | 1004 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Escambia | 275 | 1482 | 46 | 227 | 218 | 41 | 1041 | 5 | 125 | 0 | 1477 | 0 |
| Flagler | 9 | 64 | 0 | 0 | 0 | 1 | 10 | 0 | 0 | 0 | 0 | 0 |
| Franklin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gadsden | 1 | 1 | 1 | 1 | 0 | 3 | 96 | 2 | 14 | 0 | 300 | 0 |
| Gilchrist | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Glades | 9 | 13 | 15 | 23 | 0 | 8 | 101 | 0 | 0 | 0 | 0 | 0 |
| Gulf | 46 | 363 | 0 | 0 | 0 | 1 | 20 | 0 | 0 | 0 | 0 | 0 |
| Hamilton | 24 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hardee | 4 | 7 | 0 | 0 | 0 | 5 | 68 | 1 | 12 | 0 | 287 | 0 |
| Hendry | 3 | 15 | 5 | 8 | 0 | 3 | 100 | 0 | 0 | 0 | 0 | 0 |
| Hernando | 11 | 22 | 1 | 1 | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 0 |
| Highlands | 28 | 90 | 0 | 0 | 28 | 5 | 76 | 0 | 0 | 0 | 926 | 1 |
| Hillsborough | 907 | 10399 | 373 | 4035 | 29 | 78 | 2290 | 22 | 861 | 588 | 20340 | 78 |
| Holmes | 29 | 175 | 0 | 0 | 0 | 13 | 174 | 0 | 0 | 0 | 743 | 0 |
| Indian River | 12 | 25 | 2 | 3 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 |
| Jackson | 0 | 0 | 0 | 0 | 0 | 15 | 174 | 2 | 18 | 0 | 0 | 0 |
| Jefferson | 1 | 2 | 1 | 1 | 0 | 8 | 116 | 1 | 2 | 1 | 354 | 0 |
| Lafayette | 1 | 1 | 0 | 0 | 0 | 15 | 262 | 0 | 0 | 0 | 934 | 11 |
| Lake | 24 | 107 | 0 | 0 | 0 | 13 | 41 | 1 | 1 | 0 | 0 | 0 |
| Lee | 142 | 271 | 13 | 14 | 0 | 7 | 74 | 6 | 54 | 0 | 0 | 0 |
| Leon | 203 | 489 | 1 | 1 | 0 | 13 | 106 | 6 | 90 | 0 | 1578 | 0 |
| Levy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Liberty | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Madison | 0 | 0 | 0 | 0 | 0 | 5 | 79 | 2 | 4 | 0 | 581 | 0 |
| Manatee | 44 | 90 | 2 | 7 | 0 | 24 | 430 | 16 | 76 | 0 | 3513 | 38 |
| Marion | 33 | 60 | 6 | 7 | 3 | 14 | 217 | 3 | 17 | 0 | 1874 | 0 |
| Martin | 54 | 215 | 0 | 0 | 0 | 6 | 63 | 1 | 8 | 0 | 5298 | 0 |
| Monroe | 10 | 16 | 3 | 4 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 |
| Nassau | 18 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Okaloosa | 91 | 425 | 1 | 7 | 0 | 2 | 7 | 0 | 0 | 0 | 0 | 0 |
| Okeechobee | 28 | 139 | 0 | 0 | 0 | 26 | 316 | 2 | 20 | 0 | 16151 | 0 |
| Orange | 307 | 3393 | 132 | 760 | 19 | 16 | 187 | 19 | 487 | 0 | 1 | 0 |
| Osceola | 13 | 23 | 12 | 15 | 0 | 8 | 54 | 0 | 0 | 0 | 1543 | 43 |
| Palm Beach | 478 | 1849 | 30 | 140 | 0 | 32 | 302 | 36 | 578 | 0 | 0 | 23 |
| Pasco | 22 | 40 | 1 | 5 | 0 | 20 | 189 | 1 | 1 | 0 | 4616 | 0 |
| Pinellas | 662 | 3433 | 33 | 70 | 225 | 10 | 121 | 58 | 1111 | 3723 | 2215 | 10 |
| Polk | 362 | 2236 | 14 | 61 | 277 | 35 | 649 | 3 | 62 | 5610 | 558 | 29 |
| Putnam | 69 | 604 | 1 | 3 | 0 | 3 | 18 | 0 | 0 | 0 | 0 | 0 |
| St. Johns | 55 | 164 | 2 | 3 | 85 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| St. Lucie | 85 | 984 | 0 | 0 | 0 | 4 | 49 | 6 | 55 | 0 | 1666 | 0 |
| Santa Rosa | 0 | 0 | 0 | 0 | 0 | 13 | 105 | 0 | 0 | 0 | 486 | 0 |
| Sarasota | 81 | 124 | 3 | 3 | 25 | 5 | 55 | 3 | 11 | 0 | 688 | 4 |
| Seminole | 93 | 285 | 0 | 0 | 0 | 6 | 102 | 0 | 0 | 0 | 0 | 0 |
| Sumter | 11 | 59 | 0 | 0 | 0 | 6 | 81 | 0 | 0 | 0 | 256 | 0 |
| Suwannee | 4 | 4 | 3 | 6 | 0 | 4 | 55 | 1 | 12 | 0 | 0 | 0 |
| Taylor | 5 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Union | 6 | 103 | 0 | 0 | 0 | 1 | 63 | 0 | 0 | 0 | 0 | 2 |
| Volusia | 224 | 1460 | 19 | 165 | 0 | 20 | 316 | 10 | 200 | 0 | 2061 | 0 |
| Wakulla | 9 | 10 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Walton | 21 | 146 | 1 | 7 | 0 | 7 | 51 | 1 | 8 | 0 | 729 | 7 |
| Washington | 28 | 142 | 0 | 0 | 0 | 9 | 211 | 1 | 1 | 0 | 108 | 0 |

## TABLE 18 (Continued)

## MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1965

| COUNTY | P. SANITATION (Continued) | | | | V. HEALTH EDUCATION | | | | | | | | X. LAB. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Private Premises 35 | | Public Premises 36 | | | | | | | | | | |
| | Admitted | Visits | Admitted | Visits | Meetings Attended Spectator 1 | Meetings Attended Participant 2 | Talks Made 3 | Conferences 4 | Programs Using Audio-Visual Aids 5 | Radio and TV Programs Participant 6 | News Articles Preparation and/or Publication 7 | Exhibits Prepared and/or Set Up 8 | Specimens Examined 1-30 |
| Total 1965 | 91256 | 160594 | 20232 | 58607 | 11934 | 10825 | 8970 | 32992 | 4736 | 341 | 1722 | 1046 | 760191 |
| Alachua | 328 | 976 | 96 | 2149 | 219 | 232 | 179 | 724 | 132 | 4 | 20 | 7 | 13924 |
| Baker | 2 | 2 | 0 | 0 | 16 | 2 | 11 | 0 | 3 | 0 | 0 | 0 | 1430 |
| Bay | 502 | 893 | 15 | 32 | 81 | 57 | 88 | 101 | 12 | 1 | 7 | 1 | 10351 |
| Bradford | 0 | 0 | 0 | 0 | 178 | 68 | 23 | 72 | 6 | 1 | 13 | 1 | 1778 |
| Brevard | 338 | 698 | 483 | 1087 | 240 | 449 | 89 | 2941 | 24 | 13 | 23 | 3 | 16379 |
| Broward | 681 | 864 | 226 | 682 | 257 | 191 | 233 | 1892 | 85 | 31 | 45 | 80 | 51436 |
| Calhoun | 13 | 16 | 3 | 32 | 33 | 22 | 5 | 279 | 10 | 1 | 3 | 0 | 2196 |
| Charlotte | 44 | 127 | 25 | 152 | 93 | 142 | 85 | 338 | 100 | 6 | 33 | 0 | 6529 |
| Citrus | 152 | 330 | 14 | 65 | 26 | 47 | 38 | 41 | 34 | 0 | 2 | 0 | 664 |
| Clay | 13 | 56 | 17 | 244 | 117 | 327 | 70 | 476 | 92 | 3 | 4 | 41 | 2757 |
| Collier | 190 | 611 | 52 | 119 | 172 | 124 | 47 | 132 | 43 | 2 | 23 | 10 | 4098 |
| Columbia | 13 | 53 | 18 | 57 | 70 | 20 | 8 | 247 | 4 | 0 | 15 | 0 | 3305 |
| Dade | 18448 | 29578 | 10373 | 21295 | 1065 | 1673 | 1208 | 3500 | 491 | 42 | 63 | 182 | 92299 |
| DeSoto | 23 | 53 | 3 | 52 | 25 | 17 | 7 | 119 | 26 | 3 | 6 | 1 | 2309 |
| Dixie | 20 | 29 | 18 | 40 | 15 | 11 | 19 | 11 | 15 | 0 | 5 | 0 | 1790 |
| Duval | 3611 | 5621 | 165 | 745 | 237 | 462 | 155 | 756 | 75 | 8 | 47 | 41 | 21268 |
| Escambia | 1262 | 1336 | 1591 | 1726 | 297 | 291 | 445 | 205 | 312 | 1 | 41 | 1 | 31849 |
| Flagler | 98 | 149 | 34 | 173 | 8 | 18 | 6 | 99 | 4 | 0 | 0 | 0 | 1676 |
| Franklin | 14 | 46 | 19 | 148 | 8 | 17 | 2 | 17 | 1 | 0 | 4 | 0 | 1948 |
| Gadsden | 71 | 280 | 11 | 19 | 33 | 116 | 59 | 710 | 34 | 9 | 10 | 0 | 7284 |
| Gilchrist | 0 | 0 | 0 | 0 | 26 | 28 | 38 | 60 | 4 | 0 | 4 | 0 | 1787 |
| Glades | 37 | 231 | 6 | 39 | 57 | 41 | 20 | 138 | 3 | 1 | 7 | 2 | 1203 |
| Gulf | 63 | 92 | 35 | 61 | 0 | 9 | 5 | 39 | 2 | 0 | 2 | 1 | 1839 |
| Hamilton | 21 | 55 | 28 | 34 | 21 | 49 | 35 | 36 | 18 | 0 | 3 | 14 | 2063 |
| Hardee | 43 | 69 | 10 | 51 | 26 | 48 | 8 | 67 | 7 | 4 | 6 | 0 | 2369 |
| Hendry | 9 | 157 | 1 | 16 | 48 | 72 | 29 | 313 | 10 | 0 | 14 | 11 | 3853 |
| Hernando | 29 | 42 | 5 | 5 | 5 | 3 | 19 | 73 | 10 | 1 | 0 | 0 | 614 |
| Highlands | 109 | 128 | 17 | 90 | 78 | 57 | 5 | 646 | 4 | 0 | 5 | 0 | 2514 |
| Hillsborough | 43616 | 52870 | 2904 | 5477 | 1664 | 1052 | 839 | 933 | 457 | 37 | 103 | 66 | 98921 |
| Holmes | 36 | 49 | 11 | 19 | 26 | 52 | 14 | 72 | 15 | 0 | 3 | 0 | 3639 |
| Indian River | 26 | 429 | 9 | 288 | 72 | 63 | 55 | 182 | 15 | 1 | 30 | 1 | 5498 |
| Jackson | 67 | 157 | 36 | 87 | 46 | 37 | 29 | 31 | 9 | 1 | 5 | 3 | 6157 |
| Jefferson | 874 | 950 | 473 | 510 | 63 | 34 | 44 | 103 | 49 | 0 | 11 | 19 | 4863 |
| Lafayette | 20 | 32 | 25 | 42 | 10 | 11 | 10 | 13 | 3 | 0 | 5 | 0 | 638 |
| Lake | 536 | 723 | 82 | 206 | 27 | 22 | 25 | 195 | 11 | 0 | 0 | 7 | 4061 |
| Lee | 1798 | 1836 | 118 | 192 | 308 | 56 | 45 | 128 | 12 | 5 | 18 | 2 | 10440 |
| Leon | 2766 | 3286 | 200 | 464 | 98 | 77 | 287 | 253 | 50 | 5 | 94 | 3 | 18990 |
| Levy | 82 | 186 | 32 | 111 | 14 | 59 | 88 | 25 | 39 | 0 | 3 | 12 | 2282 |
| Liberty | 1 | 1 | 0 | 0 | 4 | 3 | 1 | 137 | 21 | 0 | 1 | 0 | 1337 |
| Madison | 10 | 15 | 9 | 18 | 35 | 21 | 25 | 10 | 16 | 0 | 5 | 0 | 1916 |
| Manatee | 604 | 1056 | 62 | 337 | 325 | 137 | 179 | 347 | 67 | 2 | 62 | 4 | 14591 |
| Marion | 379 | 573 | 87 | 242 | 217 | 85 | 30 | 369 | 24 | 6 | 4 | 1 | 10367 |
| Martin | 632 | 711 | 97 | 597 | 102 | 104 | 20 | 71 | 12 | 1 | 2 | 0 | 2194 |
| Monroe | 208 | 235 | 58 | 197 | 119 | 141 | 50 | 693 | 23 | 2 | 38 | 6 | 5821 |
| Nassau | 23 | 125 | 3 | 33 | 22 | 68 | 44 | 229 | 34 | 4 | 28 | 152 | 2644 |
| Okaloosa | 76 | 172 | 176 | 628 | 59 | 177 | 75 | 2122 | 10 | 0 | 5 | 1 | 7208 |
| Okeechobee | 28 | 39 | 71 | 173 | 49 | 26 | 2 | 53 | 0 | 0 | 0 | 0 | 1029 |
| Orange | 235 | 4418 | 192 | 6239 | 867 | 701 | 578 | 1120 | 307 | 21 | 126 | 24 | 46683 |
| Osceola | 20 | 346 | 22 | 411 | 16 | 26 | 24 | 35 | 10 | 0 | 5 | 2 | 2694 |
| Palm Beach | 1857 | 3601 | 563 | 1602 | 1575 | 663 | 775 | 2009 | 433 | 53 | 98 | 60 | 41110 |
| Pasco | 59 | 481 | 55 | 159 | 28 | 26 | 14 | 37 | 10 | 0 | 5 | 0 | 5883 |
| Pinellas | 7728 | 39162 | 683 | 7469 | 1081 | 623 | 1240 | 910 | 625 | 24 | 185 | 17 | 67613 |
| Polk | 740 | 1428 | 152 | 463 | 335 | 442 | 645 | 3115 | 421 | 2 | 126 | 23 | 33483 |
| Putnam | 217 | 354 | 56 | 260 | 57 | 61 | 39 | 26 | 18 | 2 | 0 | 1 | 4451 |
| St. Johns | 217 | 423 | 10 | 54 | 141 | 85 | 157 | 535 | 124 | 12 | 27 | 58 | 6848 |
| St. Lucie | 477 | 742 | 124 | 929 | 196 | 165 | 40 | 120 | 6 | 5 | 10 | 0 | 4546 |
| Santa Rosa | 15 | 21 | 20 | 203 | 90 | 127 | 89 | 696 | 33 | 0 | 37 | 1 | 3735 |
| Sarasota | 851 | 1495 | 205 | 453 | 205 | 418 | 163 | 3352 | 115 | 2 | 70 | 150 | 7674 |
| Seminole | 273 | 976 | 40 | 388 | 180 | 218 | 224 | 356 | 104 | 8 | 68 | 21 | 5533 |
| Sumter | 80 | 159 | 10 | 27 | 22 | 26 | 10 | 95 | 24 | 0 | 6 | 3 | 2753 |
| Suwannee | 15 | 22 | 4 | 15 | 30 | 46 | 18 | 62 | 5 | 1 | 7 | 0 | 2106 |
| Taylor | 99 | 196 | 21 | 37 | 63 | 43 | 18 | 19 | 4 | 0 | 8 | 3 | 2033 |
| Union | 28 | 57 | 29 | 125 | 38 | 8 | 2 | 20 | 1 | 0 | 27 | 0 | 877 |
| Volusia | 230 | 494 | 256 | 924 | 252 | 260 | 107 | 325 | 54 | 9 | 90 | 9 | 21609 |
| Wakulla | 46 | 97 | 14 | 23 | 11 | 12 | 13 | 119 | 9 | 1 | 1 | 0 | 2129 |
| Walton | 120 | 144 | 50 | 81 | 32 | 41 | 11 | 20 | 5 | 6 | 3 | 1 | 2492 |
| Washington | 33 | 41 | 8 | 11 | 4 | 16 | 5 | 23 | 0 | 0 | 1 | 0 | 1831 |

# BUREAU OF MATERNAL AND CHILD HEALTH

**DAVID L. CRANE, M.D., M.P.H.**
**Director**

This bureau functions under the premise that its responsibility is broader than the mere prevention of illness, injury and death among mothers and children in Florida. In order to improve the health of this segment of the population, efforts have been and must continue to be focused upon better total health, through wider understanding and utilization of positive approaches which foster good health. While these approaches are based, in many cases on specific prevention, as is the case with immunization procedures, adequate nutrition and alertness to accident hazards must also be encouraged.

As a result of long planning and concerted action, the state plan for comprehensive service for the mentally retarded was completed. This plan, in several sections, stresses the importance of sound preventive care for the prenatal patient, particularly those recognizable as constituting a "high risk" of obstetric difficulty. One special project was developed with bureau assistance and funded by the Children's Bureau in excess of one-half million dollars to provide special care for such patients in Dade County. A similar grant proposal is currently in preparation to develop a program in a group of rural counties in north central Florida. While such grants provide a means to offer services not already in existence, or at least not adequately coordinated and utilized, they present the health agency with a number of complex problems which are increasingly difficult to overcome. Rules and regulations pertaining to special grants of this nature are requiring increasing amounts of time and effort to reconcile with the traditional patterns of public health programming.

With the advice and backing of a widely representative Advisory Committee appointed by the Florida Medical Association (FMA), a plan for comprehensive phenylketonuria (PKU) testing was developed and will be put into operation early in the new year.

Continued efforts have been made to broaden the base of the child spacing program. By the year's end every county except one offered this service, with the assistance of the bureau. The oral contraceptives lead the list in utilization and patient acceptance, but the intrauterine contraceptive devices (IUDs) are becoming increasingly popular in the larger counties. Now that this service has been established in proximity to over 98 per cent of the state's population, the effort to reach more patients and bring them into this program is most imperative. It is estimated that this service is now being utilized by 10,000 to 20,000 women who need and could qualify for the service.

Many opportunities were offered during the year for close and productive working relationships with a variety of official and voluntary agencies. These included the Florida Crippled Children's Commission, the State Department of Education (SDE), the State Department of Public Welfare, the FMA and its special committees and local medical societies, Florida Congress of Parents and Teachers, Florida Cooperating Council for Children and Youth, Florida Association for Retarded Children, the newly created Division of Mental Retardation.

### MATERNAL HEALTH

Major emphasis has been placed on the improvement of maternity clinic services by the County Health Departments (CHD). The obstetrical consultant has reviewed each county's program and has made recommendations for improvements wherever these have been deemed necessary and possible to achieve. These efforts have been appreciated by the health officers and have led to a more effective service in many areas. There is still a great deal of work to be done, particularly with smaller rural counties, where maternal health services are either non-existent or poorly developed. Continued emphasis will be put on direct consultation in the coming year.

For many years the trend has been toward more in-hospital births, with delivery by a physician. In 1964, the most recent figures available at the time of preparation of this report, 99.3 per cent of all white infants were so delivered. The same general trend has been observed among the nonwhite population though progress in this direction has been considerably less rapid. Fully 14 per cent of nonwhite infants were still delivered in 1964 outside the hospital. Most of these were delivered at home by midwives. There remain only 179 licensed midwives in Florida at the close of 1965 and they become less important in the total maternal care effort each year. Certain areas still do not have access to sufficient numbers of physicians and adequate facilities so that a small number of midwife deliveries may be anticipated for some time to come. All midwives are licensed by the State Board of Health (SBH) and supervised by CHDs in Florida.

Preliminary reports indicate there were 42 maternal deaths reported in Florida during 1965 as compared to 58 in 1964. The maternal mortality rate decreased somewhat as compared with last year (1964 — 5.1, 1965 — 3.9 per 10,000 live births). It would now appear that 1964 was, for unknown reasons, an unusually bad year as regards maternal mortality while 1965 has reverted more nearly to the baseline observed in the recent past. Proper reporting of maternal deaths remains a serious problem for which no solution has yet been found.

### INFANT AND PRESCHOOL HEALTH

Due to our inability to obtain the services of a pediatric consultant despite active recruitment efforts over the past year, the child health aspects of the total program have not kept pace with program developments in the maternal care area. However, new federal funds made available through the Social Security amendments stress infant, preschool and school health for socioeconomically deprived children. The coming year will certainly bring about a better balance in program planning and implementation.

Preliminary figures indicate that there were 117,006 resident live births in 1965 and a provisional birth rate of 18.4 per 1000 population. The falling birth rate of the past several years has continued despite the high proportion of young adults in the general population. Many factors obviously contribute to this trend, but certainly wider application of family planning must be considered as one of the factors responsible for this decline.

There were 3027 reports of infant deaths in Florida during 1965 with a resultant provisional mortality rate of 28.3 for each 1000 live births. The most significant contributory cause for these deaths continues to be prematurity. It has also been noted that congenital malformations are being reported more frequently as a cause of morbidity and mortality.

### SCHOOL HEALTH

School health is receiving more emphasis due to the knowledge that education must carry the brunt of the effort to combat health problems. Schools receive requests to teach about smoking, alcohol, venereal disease, mental health, dental health, narcotics and a host of other health problems. Surveys have established the fact that health education is adequately taught at the elementary school level but very poorly taught, if at all, at the junior or senior high school level. The curriculum is crowded and while the school administrators acknowledge the need for health education, they find it difficult to make a place for health instruction in the present crowded school day.

It has been found effective for principals and school health coordinators to participate in workshops to identify health problems, in cooperation with CHD personnel, PTAs and the voluntary health agencies at the local level. Some of the counties scheduling such workshops have found partial or even complete solutions to many of their health problems. Accreditation requirements in the health areas were evaluated and plans laid for implementation on a reasonable basis to avoid confusion. Similar workshops were scheduled with the PTAs where recommendations for school health were made. In some cases the individual school personnel scheduled a workshop due to the critical nature of the health problem confronting that school.

The Health Project in Teacher Education is another effort to give teaching personnel assistance with health problems. There were 82 teachers enrolled during the summer of 1965 at the five participating universities. The enrollment came from 28 CHDs and one city health department. An evaluation of the course was held in the fall and the consensus of the group was that the course should be offered again in 1966. At this evaluation session nursing supervisors and health officers from selected counties were invited to attend.

The primary responsibility for the health of the child rests with the parents. The SBH and SDE, through their respective CHDs and boards of public instruction, are responsible by law to protect the health of the school-age child. Efforts are focused on assisting the schools to assume the legal and moral responsibilities to their community in the most effective and efficient manner possible. The approach should emphasize a community health program developed and promoted through the existing educational agency.

The FMA's School Health Medical Advisory Committee has been of great assistance in school health. The group acts in an advisory capacity to the SDE and SBH in matters relating to health problems confronting the school system.

During the year a grant proposal for education of school children was submitted to the U. S. Department of Health, Education and Welfare for possible funding. The action was a direct result of an experimental program in the Duval County school system.

The usual screening of vision and hearing has continued to be a part of the health services in schools. Some schools carried out special screening programs for tuberculosis and hookworm. Information for mass polio immunizations was disseminated through the schools and many schools were used as the clinic site for administration of the polio vaccine.

Public health nurses, sanitarians and public health educators at the local level act as resource persons for teachers and other school personnel and work diligently toward the improvement of school health programs. Efforts have been made to have all schools offer health education as an integral part of the curriculum. A health education course can give proper emphasis to universal areas of concern such as venereal disease, dental and mental health, alcohol, smoking, narcotics and sex education, as well as a variety of unique health problems that may confront individual communities at one time or another.

### PREMATURE PROGRAM AND NURSE TRAINING

The Premature Demonstration Center (PDC) was established in 1950 at Jackson Memorial Hospital, Miami, to provide direct medical and nursing care for premature infants. A training program on the care of premature infants was instituted as an important activity of the Center in 1958. In 1965, 39 registered nurses from Florida, Georgia, Alabama and South Carolina participated in two five-day seminars. The seminar programs were given by personnel from the PDC, Departments of Pediatrics and Obstetrics of Jackson Memorial Hospital, the University of Miami School of Medicine and the Dade County Department of Public Health.

### HEALTH SERVICES FOR MIGRATORY AGRICULTURAL WORKERS

Steady progress was made during 1965 toward the goal of bringing health services to Florida's 100,000 agricultural migrants. The U. S. Public Health Service (USPHS) increased the amount of the original grant for this purpose thus enabling a total of 13 CHDs to actively participate in the migrant health program under the Florida State Migrant Health Project. During the latter part of the year an additional county expressed the desire to participate and was included in the project revision and continuation request submitted to the USPHS near year's end to cover project expenses during 1966.

The Health Service Index and Referral Form System, which is designed to facilitate referrals of agricultural migrants for health service continuity, was strengthened during the year by increased participation both within and outside the state. The number of Florida counties participating in the system increased during the year from 14 to 22. A total of 10 states are in the system since the original four were joined by six others. A review of 541 referral forms completed by November showed that direct service was provided to 52.7 per cent of the patients referred, that there was a total of 811 requests for service and that five categories of service (immunization, health appraisal, prenatal care, child spacing, chest X-ray) accounted for 81 per cent of the requests. The review resulted in increased information about travel patterns of east coast migrants which will be of future value.

The grant from the USPHS for expansion of the migrant project was awarded a short time prior to the spring exodus of the migrant workers from Florida. Upon their return in the fall most of the plans for their health care were operational and services rendered picked up momentum toward the close of the year. Some of the participating counties offered both day and night medical clinics utilizing private physicians as clinicians.

The Children's Bureau continued its support of migrant health services. Funds supplied by this agency enabled certain health workers in four counties to render needed care to migrants and assured the continued use by Palm Beach CHD of a mobile clinic to serve rural areas in that county. In addition, the USPHS granted funds to Palm Beach CHD to employ more sanitarians for an increased environmental sanitation program directed toward upgrading migrant living conditions. A grant was also made by the USPHS to Dade County to carry on a migrant project designed to provide health services for the migrants in that county.

Close cooperation between the SBH and other state and federal agencies resulted in mutual benefits for the agencies involved and for the migrants. One example of this was the inclusion of certain health information on proposed data processing cards devised by the SDE to simplify and speed up the transmittal of scholastic records of migrant school children in selected pilot counties and states. The cards will be sent to the schools serving the areas the children move on to during their travels thus assuring that both their educational and health needs are met.

## MENTAL RETARDATION

Two ongoing programs were continued while a third project already in the planning stage was brought nearer fruition. The plan of operations for the Dade County Developmental Evaluation Clinic (special Children's Bureau Project) was completely rewritten to include an expanded program of evaluation and service to mentally retarded children in the area. This clinic, in its eighth year of service, is considered an outstanding program in the United States. One of the major developments in the clinic program has been its emergence as a training center for medical students and physicians, social workers, psychologists and nurses.

A major statewide effort will be underway in the opening weeks of 1966 whereby newborn infants in Florida will be tested during the early days of life for the presence of phenylketonuria (PKU). The SBH was charged by the 1965 Legislature with the responsibility of promoting such a testing program, and a cooperative effort by the private physicians, hospitals and CHDs has been developed. A registry of all known cases is maintained in the bureau and the necessary diet supplement, which prevents or reduces the adverse effects of the condition, is provided by the SBH to indigent families having a child with a diagnosed case.

## POSTGRADUATE OBSTETRIC-PEDIATRIC SEMINAR

This annual conference for public health personnel and interested physicians from five southeastern states has been held in Florida for fifteen years. The program in 1965, as in previous years, brought together an outstanding faculty who presented information of current interest and usefulness to those in attendance. Tennessee, the only state in the southeastern region not previously participating, has now accepted an invitation to take part in next year's seminar.

The attendance at the 1965 seminar is summarized below.

### TABLE 19

### POSTGRADUATE OBSTETRIC-PEDIATRIC SEMINAR REGISTRATION BY STATES, 1965

| STATE | Doctors | Nurses | Other | Total |
|---|---|---|---|---|
| Alabama . . . . . . . . . . . | 20 | 5 | 0 | 25 |
| Georgia . . . . . . . . . . . | 35 | 2 | 0 | 37 |
| Mississippi . . . . . . . . . . | 5 | 0 | 0 | 5 |
| South Carolina . . . . . . . | 31 | 2 | 0 | 33 |
| Other States. . . . . . . . . | 3 | 0 | 0 | 3 |
| Florida . . . . . . . . . . . . | 84 | 43 | 5 | 132 |
| TOTALS. . . . . . . . . | 178 | 52 | 5 | 235 |

## BUREAU OF MENTAL HEALTH

**ELTON S. OSBORNE, Jr., M.D.**
Acting Director

This bureau concerns itself with policies, plans and work of the State Board of Health in the field of mental health. Activities are directed toward promotion of mental health and prevention of mental illness through cooperation with county, state, regional and national programs.

### COMMUNITY MENTAL HEALTH SERVICES

Since 1947, when the Governor appointed the State Board of Health (SBH) as the state's mental health authority, the community mental health program has developed so as to be known as perhaps the best in the South. With the assistance of local organization and county health departments, 21 mental health clinics are in operation, which seek to meet community clinic needs.

Important professionals are the mental health workers who actively develop and coordinate community efforts for mental health, provide counseling, consultation, testing and evaluation and education to the 35 counties they serve. Since the beginning of the program in 1954, it has expanded to 24 specialists in community health activity.

Thirty-two psychiatrists, four full-time, have been employed to assist in the mental health and public health clinics, professional staff consultation and the drug therapy program.

The 42 county health units serving the 67 counties actively participated in public health nursing service to families and patients with emotional ills, including those patients released to their home communities on trial visits from the four state hospitals.

With the assistance of the Vocational Rehabilitation Service of the State Department of Education, and local Mental Health Association, 11 social clubs for former psychiatric patients have been organized and seek to provide readjustment assistance.

### EDUCATIONAL ACTIVITIES FOR COMMUNITY MENTAL HEALTH

In May, the bureau staff coordinated a regional conference on "Social Rehabilitative Clubs for Recovering Mental Patients." Approximately 65 community mental health leaders from the Region IV area were in attendance. In June, a "Symposium on Community Counseling" was held in Palm Beach Gardens and brought together for inter-discipline dialogue, clergymen, physicians, educators, psychologists and social workers.

The need for primary education in mental health was emphasized by two of the bureau's staff members, who developed a broad statewide range of lectures and workshops. Sixteen professional training workshops and 45 lectures were focused on the many facets of mental illness. Twelve parent training institutes and 43 lectures were conducted to assist in parental understanding of emotional maturative needs.

### CONSULTATION ACTIVITIES

The bureau staff has consistently seen as one of its primary roles professional assistance in the field of mental health to nurses in both public health service and in general hospitals, health officers, clinic personnel and various agency staffs.

The consultants began in the late spring seeking to help local communities begin grant planning for comprehensive mental health centers, and Florida was the first in the country to receive funds for a general hospital center. Florida was also the first state in Region IV to have its state construction plan accepted.

Under the direction of Edward Flemming, Ed.D., the Interagency Committee on Children, composed of supervisors of state agencies which serve children, met three times. The meetings were designed to share program understanding and develop agency coordination.

### MENTAL HEALTH PLANNING

The Mental Health Planning Program was a federally supported activity that extended from April 1, 1963, to June 30, 1965. Its purpose was to prepare a plan for the organization, operation and expansion of comprehensive mental health services throughout the state in years to come. In the first year of the program, the Florida Mental Health Advisory Planning Council was organized with a membership of 104 interested citizens, most of them representing voluntary, professional or governmental agencies interested in mental health. From this group a Steering Committee was elected, which proceeded to organize 11 task forces to gather information on various aspects of a mental health program and make recommendations for future activities. The counties were asked to furnish information for the state planning group and to organize for the development of local plans.

By the end of 1964, the task forces had completed their data gathering and written reports containing recommendations for discussion by the Mental Health Advisory Planning Council. Many counties had sent the requested information to the Bureau of Mental Health to be used by the Steering Committee and Advisory Planning Council in plan formulation, and a number had signified their intention of sending in local plans.

Preliminary drafts of the Task Force reports were submitted to the Steering Committee in early 1965. The Committee analyzed the reports, suggested modifications and submitted a combined report to the Florida Mental Health Advisory Planning Council. It was approved by the Council on March 8, 1965, thereby becoming the Florida Plan for Mental Health as recommended by the Council to the SBH.

Fifty counties contributed information that was embodied in the Plan, and 17 counties and one multi-county area sent in reports which were appended to it.

The remainder of the project year, which ended June 30, 1965, was devoted to the preparation of the Plan for printing, the securing of bids, and the actual printing. The *Florida Plan for Mental Health* was published by the State Board of Health in two volumes, one of which is the Detailed Report of the Council, and the other a Summary. Distribution began in July and August, 1965, and sporadic requests for the two books continued to be filled throughout the year.

The *Florida Plan for Mental Health,* the result of two years of planning activity, is a guide for the orderly, long-range expansion of community-based programs for the promotion of mental health, the prevention of mental illness, and the treatment and rehabilitation of the mentally ill.

### ADMINISTRATIVE CHANGE

The 1965 Florida Legislature passed House Bill No. 114, to amend Section 965.01(3), Florida Statutes, which changed the Mental Health Authority from the SBH to the Division of Mental Health, effective July 1. However, since the Division was not in a position to accept the responsibilities for the program immediately, a gradual phasing out of the program began, initially with realignment of bureau consultants. However, the total program remained with the SBH through 1965, with the exception of a part of the clinic consultation activities.

## TABLE 20

### DISCHARGED PATIENTS BY CLINICS, TYPE OF SERVICE, CONDITION ON TERMINATION, REFERRAL SOURCE, AND NUMBER OF NEW CASES FLORIDA CHILD GUIDANCE CLINICS, 1965

| CLINIC | Total Patients | TYPE OF SERVICE |  |  | CONDITION ON TERMINATION |  |  | REFERRAL SOURCE |  |  |  |  | Number of New Cases |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |  | Diagnosis and Treatment | Diagnostic Study Only | Other Services Only | Improved After Treatment | Unimproved After Treatment | Not Treated | Self | School | Court | Physician | Other |  |
| FLORIDA TOTAL | 8,819 | 3,206 | 3,690 | 1,923 | 2,016 | 1,209 | 5,594 | 916 | 1,582 | 982 | 1,341 | 3,998 | 7,590 |
| Bay | 335 | 125 | 136 | 74 | 69 | 56 | 210 | 58 | 62 | 16 | 21 | 178 | 310 |
| Brevard | 287 | 131 | 123 | 33 | 88 | 44 | 155 | 6 | 68 | 55 | 51 | 107 | 270 |
| Broward | 1,179 | 446 | 337 | 396 | 288 | 157 | 734 | 139 | 159 | 55 | 250 | 576 | 997 |
| Dade (Child) | 176 | 38 | 96 | 42 | 25 | 13 | 138 | 40 | 70 | 3 | 25 | 38 | 143 |
| Dade (Juvenile Court) | 317 | 32 | 285 | .... | 10 | 23 | 284 | .... | .... | 315 | .... | 2 | 295 |
| Duval (Child) | 487 | 109 | 246 | 132 | 90 | 20 | 377 | 88 | 125 | 49 | 90 | 135 | 419 |
| Duval (Adult) | 393 | 243 | 76 | 74 | 134 | 114 | 145 | 27 | 5 | 12 | 53 | 296 | 356 |
| Escambia | 593 | 249 | 280 | 64 | 182 | 70 | 341 | 79 | 103 | 58 | 58 | 295 | 478 |
| Hillsborough (Child) | 664 | 375 | 274 | 15 | 200 | 178 | 286 | 35 | 168 | 142 | 47 | 272 | 567 |
| Hillsborough (Adult) | 213 | 91 | 33 | 89 | 57 | 34 | 122 | 53 | 1 | 20 | 19 | 120 | 200 |
| Leon | 440 | 164 | 149 | 127 | 98 | 66 | 276 | 58 | 69 | 18 | 79 | 216 | 359 |
| Manatee—Sarasota | 474 | 91 | 357 | 26 | 61 | 28 | 385 | 66 | 87 | 38 | 102 | 181 | 419 |
| Orange | 649 | 208 | 203 | 238 | 128 | 80 | 441 | 86 | 193 | 61 | 77 | 232 | 563 |
| Palm Beach (Child) | 528 | 111 | 324 | 93 | 95 | 17 | 416 | .... | 65 | 12 | 76 | 375 | 439 |
| Palm Beach (Adult) | 87 | 51 | 29 | 7 | 30 | 25 | 32 | 21 | 5 | 1 | 13 | 47 | 82 |
| Pinellas (Child) | 790 | 127 | 416 | 247 | 94 | 33 | 663 | 2 | 187 | 61 | 82 | 458 | 644 |
| Pinellas (Adult) | 361 | 225 | 36 | 100 | 123 | 102 | 136 | 122 | 10 | 8 | 32 | 189 | 292 |
| Polk | 269 | 53 | 121 | 95 | 30 | 23 | 216 | 3 | 68 | 43 | 38 | 117 | 239 |
| Indian River | 314 | 166 | 125 | 23 | 130 | 39 | 145 | .... | 109 | 4 | 194 | 7 | 283 |
| Volusia | 263 | 171 | 44 | 48 | 84 | 87 | 92 | 33 | 28 | 11 | 34 | 157 | 235 |

## TABLE 21

### DISCHARGED PATIENTS BY AGE, RACE, SEX, DIAGNOSIS, AND NUMBER TREATED
### FLORIDA CHILD GUIDANCE CLINICS, 1965

| DIAGNOSIS | Total Patients | AGE IN YEARS | | | | | | | | | RACE AND SEX | | | | Number Treated |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0–4 | 5–9 | 10–13 | 14–17 | 18–20 | 21–29 | 30–44 | 45–64 | 65+ | White | | Non-White | | |
| | | | | | | | | | | | Male | Female | Male | Female | |
| FLORIDA TOTAL | 8,819 | 621 | 2,332 | 1,826 | 1,294 | 326 | 860 | 1,068 | 430 | 62 | 4,392 | 3,471 | 514 | 442 | 3,225 |
| Brain Syndrome (Acute, Chronic) Associated with Convulsive Disorder (Idiopathic Epilepsy) | 84 | 10 | 31 | 24 | 10 | 2 | 3 | 4 | .... | .... | 37 | 32 | 9 | 6 | 26 |
| Associated with Cerebral Arteriosclerosis or Senile Brain Disease | 26 | .... | .... | .... | .... | .... | .... | .... | 9 | 17 | 8 | 10 | 3 | 5 | 15 |
| All Other Brain Syndromes | 209 | 40 | 97 | 25 | 14 | 3 | 4 | 10 | 14 | 2 | 130 | 56 | 15 | 8 | 52 |
| Mental Deficiency (Familial or Hereditary) | | | | | | | | | | | | | | | |
| Mild | 52 | 1 | 26 | 18 | 6 | .... | 1 | .... | .... | .... | 17 | 20 | 10 | 5 | 2 |
| Moderate | 44 | 2 | 20 | 12 | 4 | 3 | 1 | .... | 2 | .... | 16 | 16 | 9 | 3 | 5 |
| Severe | 11 | 1 | 7 | 2 | 1 | .... | .... | .... | .... | .... | 3 | 5 | 2 | 1 | 1 |
| Severity Not Specified | 7 | .... | 1 | 2 | 2 | 1 | 1 | .... | .... | .... | 1 | 1 | 3 | 2 | 1 |
| Mental Deficiency (Idiopathic) | | | | | | | | | | | | | | | |
| Mild | 224 | 30 | 104 | 50 | 33 | 1 | 2 | 2 | 2 | .... | 106 | 64 | 32 | 22 | 32 |
| Moderate | 193 | 31 | 86 | 48 | 18 | 4 | 1 | 3 | 2 | .... | 70 | 49 | 36 | 38 | 22 |
| Severe | 90 | 23 | 34 | 21 | 7 | 1 | 3 | 1 | .... | .... | 35 | 19 | 15 | 21 | .... |
| Severity Not Specified | 19 | 14 | 3 | 1 | .... | .... | 1 | .... | .... | .... | 11 | 3 | 2 | 3 | 3 |
| Psychotic Disorders | | | | | | | | | | | | | | | |
| Involutional Psychotic Reaction | 18 | .... | .... | .... | .... | .... | .... | 1 | 16 | 1 | 2 | 15 | .... | 1 | 12 |
| Affective Reactions | 46 | .... | .... | .... | .... | 4 | 8 | 18 | 16 | .... | 10 | 33 | .... | 3 | 34 |
| Schizophrenic Reactions | 517 | 12 | 34 | 33 | 77 | 40 | 110 | 158 | 53 | .... | 176 | 238 | 39 | 64 | 372 |
| Paranoid Reactions | 5 | .... | .... | .... | .... | .... | .... | 4 | 1 | .... | 3 | 2 | .... | .... | 2 |
| Other Psychotic Reactions | 3 | .... | .... | .... | 1 | .... | .... | 1 | 1 | .... | 1 | 2 | .... | .... | .... |
| Psychophysiologic Autonomic and Visceral Disorders (Psychosomatic Disorders & Organ Neuroses) | 52 | .... | 13 | 10 | 4 | 3 | 6 | 10 | 6 | .... | 21 | 29 | .... | 2 | 33 |

## TABLE 21 (Continued)

### DISCHARGED PATIENTS BY AGE, RACE, SEX, DIAGNOSIS, AND NUMBER TREATED
### FLORIDA CHILD GUIDANCE CLINICS, 1965

| DIAGNOSIS | Total Patients | AGE IN YEARS | | | | | | | | | RACE AND SEX | | | | Number Treated |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0–4 | 5–9 | 10–13 | 14–17 | 18–20 | 21–29 | 30–44 | 45–64 | 65+ | White | | Non-White | | |
| | | | | | | | | | | | Male | Female | Male | Female | |
| Psychoneurotic Disorders | | | | | | | | | | | | | | | |
| Anxiety Reaction | 355 | 2 | 56 | 56 | 32 | 33 | 82 | 65 | 28 | 1 | 125 | 214 | 3 | 13 | 232 |
| Dissociative Reaction | 15 | .... | .... | 1 | 3 | 2 | 2 | 7 | .... | .... | 2 | 12 | .... | 1 | 7 |
| Conversion Reaction | 28 | .... | 2 | 6 | 6 | 1 | 3 | 7 | 3 | .... | 11 | 14 | .... | 3 | 18 |
| Phobic Reaction | 47 | .... | 23 | 11 | 2 | 2 | 4 | 4 | 1 | .... | 20 | 26 | .... | 1 | 31 |
| Obsessive Compulsive Reaction | 55 | 1 | 14 | 8 | 11 | 1 | 8 | 9 | 3 | .... | 36 | 19 | .... | .... | 34 |
| Depressive Reaction | 381 | .... | 4 | 14 | 23 | 15 | 98 | 155 | 64 | 8 | 85 | 279 | 4 | 13 | 307 |
| Psychoneurotic Reaction, Other | 49 | .... | 5 | 9 | 12 | 3 | 7 | 7 | 5 | 1 | 19 | 26 | 1 | 3 | 34 |
| Personality Disorders | | | | | | | | | | | | | | | |
| Personality Pattern Disturbance | 328 | 1 | 35 | 65 | 77 | 26 | 44 | 64 | 15 | 1 | 180 | 115 | 18 | 15 | 155 |
| Personality Trait Disturbance | 1,101 | 21 | 245 | 271 | 182 | 41 | 165 | 148 | 27 | 1 | 607 | 433 | 39 | 22 | 641 |
| Sociopathic Personality Disturbance | 177 | .... | 11 | 33 | 55 | 15 | 27 | 28 | 6 | 2 | 107 | 44 | 17 | 9 | 68 |
| Special Symptom Reaction | 115 | 20 | 59 | 25 | 7 | .... | 3 | 1 | .... | .... | 89 | 18 | 7 | 1 | 28 |
| Transient Situational Personality Disorders | | | | | | | | | | | | | | | |
| Gross Stress Reaction | 7 | .... | .... | 1 | 1 | .... | 2 | 1 | 2 | .... | 2 | 5 | .... | .... | 6 |
| Adult Situational Reaction | 152 | .... | .... | .... | 2 | 12 | 49 | 68 | 20 | 1 | 43 | 106 | 1 | 2 | 82 |
| Adjustment Reaction of Infancy | 1 | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | .... | .... |
| Adjustment Reaction of Childhood | 1,141 | 112 | 785 | 240 | 4 | .... | .... | .... | .... | .... | 788 | 288 | 43 | 22 | 573 |
| Adjustment Reaction of Adolescence | 695 | .... | 15 | 325 | 343 | 12 | .... | .... | .... | .... | 348 | 273 | 41 | 33 | 298 |
| Adjustment Reaction of Late Life | 8 | .... | .... | .... | .... | .... | .... | .... | 5 | 3 | 2 | 6 | .... | .... | 5 |
| Other | 22 | .... | 4 | 4 | 3 | 1 | 3 | 6 | 1 | .... | 7 | 13 | 1 | 1 | 10 |
| No Psychiatric Disorder | 283 | 101 | 66 | 45 | 18 | 7 | 15 | 20 | 11 | .... | 151 | 91 | 26 | 15 | 17 |
| No Diagnosis Made | 2,259 | 198 | 552 | 466 | 336 | 93 | 207 | 266 | 117 | 24 | 1,123 | 894 | 138 | 104 | 67 |

## FLORIDA COUNCIL ON TRAINING AND RESEARCH IN MENTAL HEALTH

This advisory board during 1965 was composed of the following members representing the professions concerned with mental health and the general public. The members of the Council during 1965 were: John T. Benbow, M.D., Macclenny; Mrs. Barbara Buchanan, Gainesville; Loyal Frisbie, Bartow; Mrs. E. W. Gautier, New Smyrna Beach; Victor B. Johnson, Ed.D., Tallahassee; W. C. Keaton, Lake City; Kent S. Miller, Ph.D., Tallahassee; Coyle E. Moore, Ph.D., Tallahassee; Edwin W. Peck, Gainesville; Philip B. Phillips, M.D., Pensacola; and Mrs. C. C. Vega, Jr., Tampa. Dr. Phillips and Dr. Moore were elected chairman and vice chairman respectively for the fiscal year beginning July 1. Four meetings were held during the year: one in Jacksonville and three in Tallahassee.

Training stipends were awarded as follows: psychiatric social work, eleven; psychiatric nursing, three; clinical psychology, five. The names of these stipend recipients are given under Coordination of Training elsewhere in this report. Seminars were sponsored for staff development in psychiatric nursing at the Polk County Junior College, Bartow; at the North Florida Junior College, Madison; and the Brevard Junior College, Cocoa. A total of 84 nurses completed the seminars. A learning experience in the operation of psychiatric units was provided through the Anclote Manor hospital for four nurses in general hospitals.

A total of $19,500 was granted for research during the year, as follows:

| | |
|---|---|
| The assessment of depression in medical inpatients<br>John J. Schwab, M.D., University of Florida | $3000 |
| A study of recidivism among female juvenile delinquents<br>D. R. Offord, M.D., University of Florida | 1020 |
| A study to determine the mental health engendering concepts in the Florida midwifery program.<br>Ethel Kirkland and Beth Hicks, Florida State Board of Health | 3000 |
| A study of the attitudes of community leaders regarding the development of comprehensive community-centered mental health facilities and services. Charles M. Grigg, Ph.D. and Travis J. Northcutt, Jr., Ph.D., Florida State University | 2500 |
| Genetic relationships between schizophrenia and a visible subpapillary plexus in the nail fold. C. E. Buchanan and Marshall B. Jones, Ph.D., University of Florida | 1880 |
| Identifying psychiatric consultation patients<br>Leon Marder, M.D., University of Florida | 2400 |
| Programming peer groups and teachers for behavior modification.<br>William D. Wolking, Ph.D., University of Florida | 700 |
| A program evaluation study of suicide prevention in Orlando.<br>Richard K. McGee, Ph.D., University of Florida | 5000 |

## BUREAU OF NARCOTICS

FRANK S. CASTOR, Ph.G.
Director

This bureau has specific duties defined by law. Statutory duties include the enforcement of state laws concerning the practice of the healing arts, the sale, administration and use of narcotics and restricted drugs, the registration of practitioners prescribing and administering such drugs, the inspection of drug stores and other agencies selling or dispensing drugs, and the manufacture and sale of drugs and cosmetics within the state.

The education of the people, both lay and professional, concerning the illegality and dangers inherent in non-compliance with these statutes is an additional duty of bureau personnel, and opportunities to confront the public in classrooms, civic associations or through the news media are utilized when possible.

Inspectors made 104 educational appearances, stressing to several thousand people the necessity for strict law enforcement and compliance, the dangers involved in the casual use of the "party drugs" (barbiturates, amphetamines and hallucinogens), and the necessity for calling in a trained bureau representative in cases where infractions are suspected.

The 13 inspectors, employed by the bureau, work from the central office in Jacksonville and from branches in Miami, Orlando, Tallahassee and Tampa. All are registered pharmacists, and have police powers to make arrests in connection with the laws enforced by the bureau. They work in close cooperation with other policing agencies, local and federal, and with the courts.

The 434 arrests topped the previous year by 44, a significant rise, accounted for by an increase of 78 in narcotic crimes with a decrease of 34 in other categories. The strong educational campaign carried on against the improper use of amphetamines and barbiturates may have been the reason for the decrease of 12 cases in this category. Arrests for pharmacy and medical violations have greatly decreased, as have infractions in the manufacture of drugs and cosmetics.

Open inspections, described as unscheduled visits to any place involved in the handling of drugs, totalled 2354, or 478 more than in 1964. Investigations made as a result of suspicion by the bureau or complaint from the public numbered 1726. Of these, 119 resulted in corrections of the violation without legal action. The 434 arrests previously mentioned are a part of this total of investigations. The remainder were not considered "detected crimes" for various legitimate reasons, such as lack of evidence.

Persons who have become victims of narcotic addiction but have not committed any crime can be sent to the state prison hospitals at Lowell and Raiford for medical treatment. Twenty-six such persons were treated in Florida this year, an increase of seven over the previous year.

Bureau personnel view with deep concern the continuing acceptance and use of the barbiturates and amphetamines ("pep pills" and "goof balls") by a youthful minority who consider them as smart or sophisticated adjuncts to social life. There were 133 arrests for this activity, mostly for sales. This dangerous practice is widespread in the state, is inadvertently protected by the laws against illegal search and seizure, and is extremely difficult to uproot. A strong educational campaign must be continued in this field as well as in other areas of narcotic control.

### SUMMARY OF ACTIVITIES, BUREAU OF NARCOTICS, FLORIDA, 1965

| | |
|---|---|
| Investigations | 1726 |
| Open inspections | 2354 |
| Arrests | 434 |
| Violations corrected where no legal action was taken | 119 |
| Aggregate sentences imposed by courts | 252 years |
| Aggregate fines imposed by courts | $3820.40 |
| Aggregate probation imposed by courts | 314 years, 10 months |
| Defendants receiving probation, deferred, withheld or suspended sentences | 119 |
| Cases discharged or nolle prosequi by courts | 66 |
| Narcotic addicts confined to state or federal institutions for treatment | 26 |
| Persons acquitted by the courts | 22 |
| Cases placed on absentee docket | 18 |
| Bonds estreated | $3500.00 |
| Talks made | 104 |
| Drugstores registered for 1965-66 | 1682 |

## TABLE 22

### PRACTITIONERS REGISTERED WITH THE STATE BOARD OF HEALTH BY COUNTY OF RESIDENCE

DECEMBER 31, 1965 (Excludes deceased practitioners)

| COUNTY | Total | Medical Doctors | Osteopaths | Chiropractors | Naturopaths | Chiropodists | Physiotherapists |
|---|---|---|---|---|---|---|---|
| Total In State | 7,405 | 5,855 | 451 | 527 | 133 | 162 | 277 |
| Alachua | 230 | 210 | 1 | 7 | ..... | 1 | 11 |
| Baker | 4 | 4 | ..... | ..... | ..... | ..... | ..... |
| Bay | 45 | 36 | 2 | 4 | ..... | ..... | 3 |
| Bradford | 10 | 7 | 2 | 1 | ..... | ..... | ..... |
| Brevard | 177 | 147 | 3 | 16 | ..... | 3 | 8 |
| Broward | 648 | 463 | 81 | 44 | 13 | 19 | 28 |
| Calhoun | 2 | 2 | ..... | ..... | ..... | ..... | ..... |
| Charlotte | 19 | 16 | 1 | 2 | ..... | ..... | ..... |
| Citrus | 12 | 7 | 1 | 2 | 1 | ..... | 1 |
| Clay | 15 | 14 | 1 | ..... | ..... | ..... | ..... |
| Collier | 26 | 20 | 2 | 4 | ..... | ..... | ..... |
| Columbia | 19 | 16 | ..... | 1 | ..... | ..... | 2 |
| Dade | 1,984 | 1,633 | 108 | 103 | 39 | 44 | 57 |
| DeSoto | 9 | 7 | 1 | 1 | ..... | ..... | ..... |
| Dixie | 1 | ..... | 1 | ..... | ..... | ..... | ..... |
| Duval | 550 | 477 | 10 | 29 | 8 | 8 | 18 |
| Escambia | 167 | 148 | ..... | 11 | ..... | 2 | 6 |
| Flagler | 2 | 2 | ..... | ..... | ..... | ..... | ..... |
| Franklin | 4 | 1 | 3 | ..... | ..... | ..... | ..... |
| Gadsden | 20 | 19 | 1 | ..... | ..... | ..... | ..... |
| Gilchrist | 1 | ..... | 1 | ..... | ..... | ..... | ..... |
| Glades | 1 | 1 | ..... | ..... | ..... | ..... | ..... |
| Gulf | 3 | 3 | ..... | ..... | ..... | ..... | ..... |
| Hamilton | 3 | 3 | ..... | ..... | ..... | ..... | ..... |
| Hardee | 10 | 9 | ..... | ..... | ..... | 1 | ..... |
| Hendry | 8 | 7 | ..... | 1 | ..... | ..... | ..... |
| Hernando | 7 | 6 | ..... | 1 | ..... | ..... | ..... |
| Highlands | 29 | 25 | 1 | 2 | ..... | ..... | 1 |
| Hillsborough | 497 | 384 | 25 | 36 | 23 | 12 | 17 |
| Holmes | 3 | 3 | ..... | ..... | ..... | ..... | ..... |
| Indian River | 30 | 23 | 1 | 4 | ..... | 1 | 1 |
| Jackson | 16 | 14 | ..... | 2 | ..... | ..... | ..... |
| Jefferson | 5 | 5 | ..... | ..... | ..... | ..... | ..... |
| Lafayette | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Lake | 62 | 45 | 4 | 8 | ..... | 3 | 2 |
| Lee | 87 | 69 | 2 | 9 | 2 | 2 | 3 |
| Leon | 95 | 80 | 3 | 3 | 1 | 2 | 6 |
| Levy | 5 | 3 | ..... | 2 | ..... | ..... | ..... |
| Liberty | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Madison | 6 | 6 | ..... | ..... | ..... | ..... | ..... |
| Manatee | 93 | 63 | 8 | 12 | 3 | 2 | 5 |
| Marion | 56 | 44 | 5 | 5 | ..... | 1 | 1 |
| Martin | 17 | 15 | ..... | 2 | ..... | ..... | ..... |
| Monroe | 37 | 29 | 4 | 1 | 1 | ..... | 2 |
| Nassau | 8 | 8 | ..... | ..... | ..... | ..... | ..... |
| Okaloosa | 28 | 24 | ..... | 4 | ..... | ..... | ..... |
| Okeechobee | 5 | 4 | ..... | 1 | ..... | ..... | ..... |
| Orange | 467 | 357 | 34 | 38 | 8 | 9 | 21 |
| Osceola | 17 | 10 | 3 | 3 | ..... | ..... | 1 |
| Palm Beach | 393 | 306 | 17 | 38 | 4 | 11 | 17 |
| Pasco | 26 | 16 | 7 | 3 | ..... | ..... | ..... |
| Pinellas | 675 | 467 | 76 | 55 | 21 | 25 | 31 |
| Polk | 234 | 195 | 4 | 19 | 2 | 4 | 10 |
| Putnam | 22 | 17 | ..... | 3 | 2 | ..... | ..... |
| St. Johns | 23 | 19 | ..... | 2 | ..... | 2 | ..... |
| St. Lucie | 40 | 33 | 2 | 4 | ..... | 1 | ..... |
| Santa Rosa | 15 | 13 | ..... | 1 | ..... | ..... | 1 |
| Sarasota | 165 | 126 | 3 | 17 | 2 | 5 | 12 |
| Seminole | 42 | 34 | 1 | 4 | 1 | 1 | 1 |
| Sumter | 2 | 1 | 1 | ..... | ..... | ..... | ..... |
| Suwannee | 7 | 6 | ..... | 1 | ..... | ..... | ..... |
| Taylor | 9 | 6 | ..... | 2 | 1 | ..... | ..... |
| Union | 1 | 1 | ..... | ..... | ..... | ..... | ..... |
| Volusia | 198 | 135 | 31 | 17 | 1 | 3 | 11 |
| Wakulla | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Walton | 9 | 8 | ..... | 1 | ..... | ..... | ..... |
| Washington | 4 | 3 | ..... | 1 | ..... | ..... | ..... |
| Out of State | 3,301 | 2,814 | 189 | 164 | 1 | 59 | 74 |
| GRAND TOTAL | 10,706 | 8,669 | 640 | 691 | 134 | 221 | 351 |

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## BUREAU OF PREVENTABLE DISEASES

C. M. SHARP, M.D.
Director

E. C. PRATHER, M.D., M.P.H.
Assistant Director

Centered in the Bureau of Preventable Diseases are the activities of the State Board of Health (SBH) concerned with the identification, definition, surveillance and control of the broad group of human diseases for which effective preventive and/or control measures are available or possible. These include the infections and infestations of man, the zoonoses, the diseases of irradiation and occupations. The several operational objectives of the administrative unit are effected through four divisions and certain sections organized for specific programs.

The state's immunization program was rewritten twice during 1965. A continuation grant request forwarded early in the year provided for extension of the project under a "generalized" administrative framework. Against some resistance on the part of the U. S. Public Health Service, the program was finally approved to allow inclusion of the special immunization activities into and to be considered a part of the larger public health program centered on family units. Later in the year, a revised project was forwarded requesting the addition of measles to the Florida program. This marked the first request of Florida for finances from this grant to support vaccine purchases.

Not a part of but consistent with the increased emphasis on immunizations, the bureau over the years has maintained a monthly immunization clinic for the SBH employees' families. This activity continued through 1965. Highlighted this year was immunizations against measles.

As a cooperative effort between the Division of Tuberculosis Control, Division of Epidemiology and Bureau of Laboratories, the bureau's research activity into the epidemiology of the unclassified mycobacterial infections has continued and enlarged during 1965.

A renewal grant, approved in midyear, provided for addition of personnel to the research staff. Late in the year a continuation grant application was forwarded requesting long term extension of this special activity.

The Tuberculosis Control Program was enlarged this year. The federally-supported special tuberculosis project, begun as a pilot program in Dade County during 1962, was extended statewide during 1965.

The bureau's "Weekly Morbidity Report" and its annual summaries of morbidity have undergone critical study for improvement during 1965. This year's annual morbidity report will reflect revised and updated methods of data tabulations and presentations: notably, publication of annual disease rates with comparative figures from previous years and summaries by geographic areas. The "Weekly Morbidity Reports" for 1966 will carry the counties grouped by area. These changes have required the coordinated efforts of all divisions and assistance from other bureaus.

## DIVISION OF EPIDEMIOLOGY

E. CHARLTON PRATHER, M.D., M.P.H.
Director

This division has the responsibility for directing and coordinating the activities aimed at surveillance and control of the preventable infectious diseases. Through the cooperating 67 county health departments (CHD), it is the central collecting agency in Florida for communicable disease morbidity statistics and, in turn, publishes the Weekly Morbidity Report. Defining the public health significance of selected infectious diseases, evaluating control procedures and casefinding methods, studying incidence, prevalence and distribution, and investigations into the cause of disease are obligations of the division. Drugs, vaccines and other biologicals for the prevention and treatment of infectious diseases are dispensed through the CHDs. Epidemiologic assistance in the investigation of disease outbreaks is an important function. The division provides accurate and current information on preventive procedures and practices for the communicable diseases, informs the public of infectious disease hazards and advocates preventive medicine principles. It is administratively responsible for the Venereal Disease Control Program, the state's Vaccination Assistance Program and the special research project on the epidemiology of unclassified mycobacterial infections.

### Poliomyelitis

Never before in the history of reportable diseases in Florida has poliomyelitis failed to appear — not a single new case was identified in 1965. In the United States, 59 acute cases were reported during the year, but 29 other states shared Florida's experience. This dread disease of childhood is on the threshold of total eradication from our country; however, it continues rampant in several areas of the world and all efforts should emphasize complete saturation immunization.

### Salmonellosis

The incidence of positive salmonella isolations has continued the upward trend observed over the past decade. In 1965, 1294 cases were identified representing 61 distinct serotypes. No seasonal variations were noted in isolation rates and monthly incidence did not vary significantly from the annual mean of three per cent of specimens examined. There were cases from all areas of the state and remarkable variations occurred in isolation rates by laboratory. The Miami Regional Laboratory recovered positive isolations from over nine per cent of the specimens examined; the Pensacola laboratory found only 0.25 per cent positive. No patterns were discernible by serotype. Data as to the source of the infections for humans, and vehicles, are scanty and inadequate for meaningful study. It was hypothecated in 1964 that food might play an important role in the epidemiology of these conditions but in face of a rising incidence of salmonellosis, the incidence of reported food poisoning dropped sharply in 1965. Special emphasis on the salmonella problem initiated this year will continue through 1966.

### Hepatitis

There were 764 cases of infectious hepatitis reported during 1965 and this condition continues as a prominent health problem in Florida. Several localized small clusters of cases were identified in as many counties but, in the main, cases were sporadic without epidemic implication. The special surveillance program conducted by several cooperating counties failed to yield interpretative patterns regarding source or spread of the disease.

Serum hepatitis had not been specifically identified in the morbidity reports prior to this year: 37 cases were reported in 1965. The names of blood donors relatable to many of these cases were collected, but epidemiologic patterns were not apparent. The special registry established for study purposes during 1965 will be continued.

### Measles

The four to six year cyclic epidemic pattern commonly observed with measles seems out of step in Florida. While the epidemic level recorded in 1964 was equaled or exceeded only by the peaks of 1954 and 1958, the post-epidemic slump in 1965 fell far below expectations: 3830 cases were reported for the year. The previous all time low in annual incidence was recorded in 1955 (1495 cases) following the particularly severe epidemic of 1954. What role the measles vaccine has played in this altered picture is unknown, but hopefully its increasing use will further depress the curve and effect an eradication of yet another serious illness of man.

### Encephalitis

Surveillance for viral encephalitis (particularly arboborne) was especially emphasized during 1965. In the spring, through special correspondence, all medical practitioners, hospitals and laboratories were alerted to the possibility of the viral encephalitis and encouraged to pursue an etiologic diagnosis in all cases coming to their attention.

Three cases of arbovirus infections were confirmed during the year; all were due to the Eastern encephalitis virus and each came from a different county (Alachua, Duval and Leon). There were 165 additional cases of viral encephalitis reported. A specific etiology was not established in most of these but, among those submitted to laboratory study, the mumps virus was common, and in some the measles virus was incriminated. Needed are reliable laboratory data regarding the infectious agent in the large number of clinically diagnosed encephalitis cases reported in Florida each year.

### Diphtheria

In spite of the availability of an effective vaccine, diphtheria continues to occur in Florida. Ten cases were reported in 1965 — seven from two small outbreaks in Highlands County (four cases) and St. Johns County (three cases). Through the efforts of the Vaccination Assistance Program, progress is being made in reducing the unimmunized segment of our population.

### German Measles

Following the sharp epidemic of German measles recorded in Florida last year, relatively few cases, 892, were reported for 1965. While data are absent, the belief has been expressed that the frequency of congenital malformations rose during the year. Needed here also are reliable data regarding the frequency and distribution of this serious complication of an otherwise mild infection.

### Influenza

The total reported cases of influenza for 1965 was 10,949 — a figure somewhat less than the epidemic peak years of 1962, 1960 and 1957-58. Approximately 2000 cases were recorded during the last two months of the year, suggesting that greater numbers might be expected for 1966. This increase was predicted in midyear and appropriate informational memoranda were distributed encouraging widespread utilization of the influenza vaccine. The disease was due to the Group A viruses in 1964; preliminary serologic evidence indicates the presence of the Group B influenza viruses at the end of 1965.

## VENEREAL DISEASE CONTROL PROGRAM

The Venereal Disease (VD) Control Program has the responsibility of reducing and eliminating the incidence and prevalence of the five diseases — syphilis, gonorrhea, granuloma inguinale, chancroid and lymphogranuloma venereum — with particular emphasis and attention upon syphilis. To this end, four basic activities have been maintained and intensified during 1965: education, reporting by private physicians, laboratory surveillance and early epidemiology.

It has become increasingly evident that VD can never be controlled nor eradicated in the absence of a well-informed public. In cooperation with the Florida State Department of Education and CHDs, the VD Control Program has endeavored to present information and to educate all ages, sexes and socioeconomic groups throughout the state. The education staff of the Program has been intensified for the purpose of working categorically in three broad areas: public school curriculum programs, community organization and support, and mass media and public awareness.

Personnel has joined CHD officials and county school systems in endeavors to initiate VD education in the regular curriculum of all junior and senior high schools. To this end, countywide VD Educational Workshops have been conducted for selected teachers so that special instruction and teaching aids about communicable diseases with specific emphasis on VD might be provided. These are ongoing programs whereby the regular qualified teacher presents basic facts to students in the normal classroom situation.

Inasmuch as VD is a community-wide problem, total community effort is needed for the control and ultimate elimination of syphilis and the other venereal diseases. Working with many community leaders, the VD Control staff has presented lectures and talks concerning the VD problem and what is being done before Parent-Teacher Associations, county medical associations, Junior Chambers of Commerce, ministerial alliances and other civic organizations in order to obtain active assistance in disseminating VD education. Organized projects were made to obtain support in the development of VD education in the school curriculum.

VD informational activities have included newspaper and magazine articles, exhibits and displays, television and radio programs, serving to create public awareness and the development of concern regarding the VD problem.

There have been several highlights in the progress of the program: the introduction and use of a manual, "Teacher's Handbook on Venereal Disease Education," with several countywide education workshops for teachers; preparation of pamphlets for use by school and CHD officials and the general public, and development and use of an exhibit, "Seconds of Infection."

The epidemiologic process of contact interviewing and investigation of all persons known to have been exposed to infectious syphilis remains our most valuable method of locating new cases. During 1965 a total of 2356 cases of early infectious syphilis were reported by public health clinics and private physicians, representing a 15 per cent increase over 1964. All stages of syphilis reported in 1965 totaled 6132, an increase of four per cent over 1964. During the coming year, syphilis epidemiology will be greatly intensified to insure rapid location and treatment of infected persons, especially those with early infectious syphilis. Due to a lack of personnel, gonorrhea epidemiology is limited primarily to military cases.

The private physician visitation program was modified in 1965 whereby initial visits were made by lay field epidemiologists to all new physicians in the state as well as routine visits to all physicians whose specialty indicated the diagnosis and treatment of VD. The portable darkfield service continues to be available to all Florida physicians upon request.

The laboratory reactor program continues to provide valuable assistance to the VD Control Program by the reporting of positive serologies for follow-up activity by CHD personnel. Improved communication between laboratories and CHDs in several areas of the state has greatly reduced the time lapse from diagnosis to beginning epidemiology on early syphilis cases. These include both public health clinics and private physician cases.

### VACCINATION ASSISTANCE PROGRAM

This project, supported by a U. S. Public Health Service grant, has been operational for two years. Routine follow-up activities for promoting immunizations of both three-month-old and 15-month-old infants and their family members are being conducted by 30 county health departments. Eight additional CHDs which joined the program during 1965 will begin the 15-month follow-up phase during 1966.

Preliminary figures from tabulations of program results indicate that immunization levels of 15-month-old children are being increased. The most significant increase for the five program diseases (polio, diphtheria-pertussis-tetanus, smallpox) appears in the nonwhite population.

During 1965 the Congress extended the enabling legislation for Immunization Program activities through June 30, 1969, giving primary emphasis to the promotion of measles immunizations. During 1966 the State Board of Health will begin promoting measles immunizations during the contact of households of 15-month-old infants.

### UNCLASSIFIED MYCOBACTERIAL PROGRAM

The research program in the epidemiology of the unclassified mycobacteria (UM) in Florida has undergone significant developments during the year 1965. The major development undoubtedly has been the volume of isolations reported from throughout Florida, largely stemming from adoption of a rapid sputum digestion technique utilizing a solution of Zephiran and trisodium phosphate by the Bureau of Laboratories for nine months of 1964. The relevant numbers of UM isolations are as follows:

| Year | 1963 (9 mo.) | 1964 (9 mo.) | 1965 (6 mo.) |
|---|---|---|---|
| No. of positive UM cultures | 248 | 1386 | 1172 |

In 1964 there were 860 individuals with first isolations of UM; in 1965, 1614 others were added to the register. The number of isolations from throughout the state reported to the UM register approximates 100 per week. There is additionally a significant increase in the colony count per isolation, and repeated isolations per individual are common. The percentage of positive smears yielding negative cultures has dropped from 25 per cent to five per cent. The significance of these large numbers of isolations with considerable colony count remains to be evaluated.

An analysis has been made of a study group of 360 cases from the 1963 register of some 2500 cases based upon the criteria: individuals with clinical or roentgenologic evidence of disease from whom there had been multiple isolations of UM with multiple colonies, and no isolations of *M. tuberculosis* or other known pathogen. The severity of the associated diseases, almost entirely pulmonary, is evidenced by the fact that only 18 per cent of the 360 patients were not hospitalized. Of those hospitalized, 77 per cent spent a minimum of six months in the hospital. A Group I infection occurred in 13.2 per cent, and 80.2 per cent had a Group III infection. Over 58 per cent of both Group I and Group IIIA cases had six isolations or more, and 68 per cent of all isolations had colony counts in excess of 10, although at that time the rapid sputum digestion technique had not been adopted. Of the patients, 15.5 per cent died as a result of their disease and 24.4 per cent accepted surgery. In 95 per cent of them the age at first isolation was over 26 years, and the incidence of Group IIIA infection for those in the 51-60 age group was double that of any other age group.

Specific recommendations have been made for the follow-up of patients having UM infections and forwarded to all CHDs.

Determination of types and neo-type strains has been done in cooperation with the Veterans Administration (VA) Hospital, Salt Lake City, Utah; the Southwest Florida Tuberculosis Hospital, and the American Type Culture Collection, Rockville, Maryland. Information has been exchanged with other persons in the UM research field at the annual convention of the American Thoracic Society, the tuberculosis associations and regularly by correspondence, particularly regarding published articles. Papers and information are also regularly exchanged with European and Australian research centers.

Close contacts have been established with the clinicians and bacteriologists of the medical schools at Miami and Gainesville, also at the VA hospitals and the larger general hospitals. Arrangements have been made with the University of Florida College of Medicine for the regular submission of small numbers of bone marrow biopsies for the culture of acid-fast organisms, and with the Duval Medical Center for the examination of tissue sections by fluorescent antibody technique from selected cases.

The lack of correlation between the proven bacteriological facts and the demonstration of acid-fast bacilli in the tissues, and their cultures and identification therefrom would appear to be a significant hiatus in the research program. The absence of evidence indicating that the soil isolates can become pathogenic for man and under what circumstances also requires elucidation. The follow-up over a considerable period of time of a selected number of constant or irregular excretors of UM without evidence of clinical disease is obviously indicated.

## DIVISION OF RADIOLOGICAL AND OCCUPATIONAL HEALTH

EDWIN G. WILLIAMS, M.D.
Director

The responsibilities of the division are to direct, coordinate and implement the programs and activities in the interrelated fields of radiological and occupational health carried out by the State Board of Health (SBH). Its primary objectives are to insure the healthful growth of the use of natural and artificially produced radiation in medicine, industry and research and healthful results of the conditions, procedures and material incident to places of employment. Combined efforts and cooperation of the Florida Nuclear and Space Commission (FNSC), U. S. Public Health Service (USPHS), the Atomic Energy Commission (AEC), the Florida Industrial Commission (FIC), the SBH, various county health departments (CHD) and others continued in the realization of these objectives.

The first full year as an AEC Agreement State witnessed rapidly increasing activity in licensing and use of radionuclides in medicine, industry and research. An Agreement State means that there is an written agreement with the USAEC for regulatory activities with respect to byproduct materials, source materials and special nuclear materials in quantities not sufficient to form a critical mass.

### Training

The division's policy of encouraging staff members to avail themselves of training opportunities and in the provision of or assistance with in-service training programs was continued in 1965. The professional and clerical staff attended formal training courses ranging from three days to 10 weeks. A course in "Management of Radiation Accidents," conducted in March, 1965, by the SBH, USPHS, University of Florida and the University of Miami, was attended by members of the radiological emergency teams sponsored by FNSC. Staff members presented informal discussions and formal lectures to special groups at the University of Miami, University of Florida and Central Florida Junior College, as well as other professional organizations.

### RADIOLOGICAL HEALTH

For convenience of description, the radiological health activities may be divided into five program areas: (1) registration of radiation-producing machines; (2) X-ray survey, consultation and radionuclides control; (3) licensing of radioactive materials; (4) environmental radiation surveillance and (5) radiological health research and emergency planning.

### Registration of Radiation-Producing Machines

To date, 6300 radiation-producing machines have been registered. In addition to registration of all sources of radiation other than radioactive materials, the primary objectives of this program are to locate the source in order to facilitate the survey and consultation program and to assist in program planning through a development of program priorities. In September and October, 1965, an analysis was made of the registration program which has been in progress since March, 1964. As a result, it was revised to make it more adaptable to the division's objectives. The program now will utilize computer programming and IBM magnetic recording tape instead of the present unit records and IBM card system.

A distribution of sources of radiation in some specific counties is presented in Table 23.

### X-Ray Survey, Consultation and Radionuclides Control

The field activities in performing delegated responsibilities in this program are centralized in the field office in Bartow.

The survey of X-ray machines and consultation with users is continuing. Geographically, this function has been rendered in some measure to all 67 counties. The objective to extend the survey and consultation program to all sources and users in the state is a continuing activity. Surveys had been performed primarily in medical and dental installations, but emphasis now is being placed on covering all other radiation-producing machines.

In 1965 the survey and consultation staff, with the aid of county personnel in Escambia, Pinellas, Dade and Orange Counties, surveyed 494 radiation-producing machines located in 347 installations. Beam size corrections were needed on 132 machines and filter corrections on 112 machines. The division and participating CHDs made 187 recommendations which would reduce unnecessary exposure to either the patient or operators of these machines.

A complete summary of the division and participating CHDs X-ray surveys and results is presented in Table 24.

Inspection and consultation visits were made to 174 facilities of licensed radioactive materials users. Emphasis was upon the industrial application of radioactive material due to hazard potential and users of radium throughout the state. Visits were made to all radium users and Civil Defense users of radioactive materials.

The Pinellas and Escambia CHDs have developed radiological health programs and authority for the inspection of the facilities of radioactive material users was delegated to these two counties during the year.

The division continued to operate its monitoring services for state and CHD personnel occupationally exposed to radiation. A total of 1997 film badges were processed during the year. Investigations were made of seven apparent over-exposures and recommendations were made for the prevention of such incidents.

### Radioactive Materials Licensing

In 1965, 113 new licenses were issued, 29 were terminated and 263 were amended. To date, there are 425 total state licenses authorizing the use of approximately 160,000 curies of radioactive materials. This number includes 224 medical, 108 industrial, 28 academic, 61 Civil Defense and four special nuclear and source material licenses. Radium licenses were re-evaluated and renewed for a two year period with the inclusion of leak testing conditions. The policy was developed, beginning January, 1966, to include radium with other radioactive materials on the same license document.

### Environmental Radiation Surveillance

The environmental monitoring program actively continued on a routine basis. The division operates the Jacksonville station of the USPHS Radiation Surveillance Network (RSN) with precipitation and high volume air samples being collected and forwarded to the USPHS for laboratory analysis.

The division, continuing the program begun in 1962 of supplementing RSN stations in the state, made air and precipitation equipment available to four stations located in Escambia, Leon, Orange and Pinellas Counties. In addition, three air samplers have been established in Brevard County for sampling in the Cape Kennedy area. Air and precipitation samples are analyzed by the SBH Regional Radiological Laboratory in Orlando. Data are reviewed and analyzed with reports being prepared and distributed by this division.

Since milk is a good indicator of environmental radiological contamination, the milk surveillance program was continued in 1965. The program was updated in September to adjust to the continual changes in dairy ownership, herdsize and milk production. This program functions with the cooperative assistance of the local CHD sanitarians and regional, county and city laboratories. Raw milk is collected representing a 10 per cent random sample of each of the six geographic regions. Aliquots are composited by the laboratories then sent to the radiological laboratory in Orlando for radionuclides analysis.

The frequency of monitoring of Iodine 131 ($I^{131}$) in milk was increased or decreased with the likelihood of $I^{131}$ contamination.

The Cape Kennedy Off-Site Radiation Surveillance Program, established in 1965, was developed through the cooperation of the USPHS, Air Force, AEC, National Air and Space Administration, FNSC, Bureau of Sanitary Engineering and various CHDs. The intent of this program is to establish baseline data relative to the normally occurring chemical and radiological elements in the environment adjacent to Cape Kennedy. Any variance in this environment incident to chemical and/or radiological compounds used on the Cape will be determined. The Off-Site area is defined as that outside the direct control of the U. S. Government in the vicinity of Cape Kennedy Air Force Station. Initially this area includes Brevard, Volusia, Seminole, Orange, Osceola and Indian River Counties.

The food and water radiation surveillance program continued in 1965 with the Bureau of Sanitary Engineering collecting and forwarding samples to the Radiological Laboratory in Orlando for analysis.

With the possibility of a nuclear power plant being constructed in the southeastern part of the state (Turkey Point), conferences have been held with the Bureau of Sanitary Engineering, the Florida Power and Light Company, the USPHS and representatives of the University of Miami looking forward to the establishment of baseline studies. Present environmental monitoring programs will be continued. The questions of deposition of radioactive materials from fossil fuels is a matter which may be undertaken by one or more of the agencies involved. Since there is also a plan with a less definite schedule for a nuclear power reactor to be established on the West Coast (Crystal River), discussions are being held with the Florida Power Corporation.

### Instrumentation

Instrumentation for the past year included: calibration of 158 instruments, calibration checks of 10 "R" meter sets, 58 instrument repairs and installation of two sampling stations. Twenty-eight Civil Defense instruments were exchanged with the Civil Defense agency and seven new ones were purchased during the year. In support of the surveillance program, 19 sampler motors were issued and two low volume air samplers were rebuilt.

### Radiological Health Research

The first phase of a project formally initiated in Florida in 1962 to study background radiation was temporarily concluded in 1965. Its primary purpose was to establish quantitative differences, if any, in levels of background radiation and to delineate areas for more intensive study. Emphasis was on measurement of external gamma radiation and radioactivity in air, food and water. Data compiled from this study have been evaluated and analyzed and a report entitled "Background Radiation in Florida" was written.

During 1965 work was continued on USPHS grant, Radionuclides in Florida Milk. This research is exploring the variations and studying the causative factors of radionuclide levels in milk and dairy feeds within the geographic locations of the state. The initial phase has been completed in the Jacksonville, Pensacola and Orlando areas, and the evaluation of data compiled to date will determine avenues for further study.

### Emergency Planning

The division continued to work with the FNSC, the Florida Highway Patrol and various colleges and universities in the state to increase the capabilities for handling radiological emergencies. Emergency teams have been organized in the Pensacola, Tallahassee, Gainesville, Jacksonville, Bartow and Miami areas. During the year substantial efforts were made in training, evaluating and equipping each of them. The indemnification and liability of team members is under advisement by the Attorney General's Office.

### TABLE 23

### DISTRIBUTION OF SOURCES OF RADIATION IN FLORIDA

| COUNTY | Radiation-Producing Machines | Radioactive Materials Licenses |
|---|---|---|
| Dade . . . . . . . . . . . . . | 1,437 | 78 |
| Pinellas. . . . . . . . . . . . | 546 | 35 |
| Broward. . . . . . . . . . . . | 544 | 22 |
| Duval . . . . . . . . . . . . . | 477 | 34 |
| Hillsborough. . . . . . . . . | 409 | 24 |
| Orange . . . . . . . . . . . . | 388 | 36 |
| Palm Beach . . . . . . . . . | 382 | 15 |
| Polk. . . . . . . . . . . . . . | 184 | 23 |
| Volusia . . . . . . . . . . . . | 173 | 5 |
| Brevard. . . . . . . . . . . . | 145 | 8 |
| Escambia . . . . . . . . . . . | 135 | 16 |
| Leon. . . . . . . . . . . . . . | 89 | 19 |
| 55 Other counties . . . . . . | 1,257 | 110 |
| TOTAL . . . . . . . . | 6,166 | 425 |

### TABLE 24

### SUMMARY OF X-RAY SURVEYS FLORIDA, 1965

| Type of Installation | Number of Installations | Number of Tube Heads | Beam Corrections Needed | Filter Corrections Needed | Recommendations for Reducing Personnel Exposure |
|---|---|---|---|---|---|
| Medical . . . . | 129 | 157 | 79 | 50 | 61 |
| Dental . . . . . | 83 | 117 | 12 | 27 | 57 |
| Hospital . . . . | 35 | 115 | 18 | 13 | 24 |
| Chiropractic. . | 35 | 37 | 10 | 5 | 10 |
| Veterinarian. . | 32 | 32 | 2 | 5 | 15 |
| Osteopathic. . | 11 | 13 | 8 | 4 | 9 |
| Podiatric. . . . | 12 | 12 | 1 | 6 | 6 |
| Industrial. . . . | 8 | 9 | 1 | 0 | 3 |
| Other. . . . . . | 2 | 2 | 1 | 2 | 2 |
| TOTAL. . . | 347 | 494 | 132 | 112 | 187 |

## OCCUPATIONAL HEALTH

The present day concept of occupational health has been broadened in definition and responsibility from the traditional definition expressed as concern for the health and welfare of the industrial worker. Now it includes others outside the industrial worker category and is expressed as concern for the health of the people who work. This would include the housewife and all those gainfully employed.

Technical assistance and consultation regarding occupational health problems are provided to the FIC under state law. Industrial plant surveys and technical studies are performed by division personnel to determine potential health hazards and airborne concentrations of toxic materials in the working environment. Requests for technical assistance are received from the FIC, state agencies, industry, labor groups and private citizens. The wide variety in the types of requests indicates the broadened concept of occupational health. Typical problems included determining the hydrogen sulfide gas concentration in a manhole, checking the ozone concentrations in walk-in meat coolers, a study to determine noise levels in a residential area near a power generating plant, and the investigation of a case of tularemia reputedly contacted by a butcher who had been handling domestic rabbit carcasses.

### Field Activities

A reduction in the number of concerns contacted or given service from the previous year total of 71 to 59 in 1965 reflected the completion of assignment in midyear of an industrial hygienist loaned to the division by the USPHS. He had been stationed at the Bartow office and provided technical assistance to CHDs with occupational health problems. He also was instrumental in promoting an interest in the development of occupational health programs and practices in a number of the more industrialized counties.

Through the efforts and cooperation of the CHDs, the survey of existing coin-operated dry cleaning machines has been completed in most counties. Additional sampling equipment necessary for determining dry cleaning solvent vapor concentrations and instruments for measuring linear air velocities were purchased by the division and loaned to the counties when requested or if needed to carry out the surveys.

Technical studies to determine the quality of compressed air supplied for scuba divers have been continued for both commercial and private air supply firms. Tests are made to determine the presence of condensed water vapor, the concentrations of carbon monoxide, carbon dioxide, oxygen, oil mist and particulates. Although Florida currently has no regulations governing the quality of scuba air, results of tests to date indicate that air suppliers are making conscientious efforts to supply compressed air which meets standards adopted by federal agencies and agencies of other states. The complaint most commonly encountered concerned the presence of objectionable odors in the compressed air, usually the result of improper maintenance of the air filtering system.

In-plant studies of the phosphate-producing companies were continued although on a reduced scale because of the loss of personnel in the occupational health section. The collection and analysis of biological samples to determine worker urinary fluoride levels as a supplement to the airborne fluoride sampling program was continued. Plans include the expansion of the joint sampling program to all phosphate-producing companies.

#### Laboratory Activities

Although considerable time was spent by division personnel in the phosphate industry, the 189 atmospheric and biological samples collected and submitted by them to the laboratory for fluoride analysis was secondary in sample number to the 299 samples received from other agencies for lead analysis. The increase in the number of samples for lead analysis resulted in part from 71 biological samples submitted by an agency associated with the space program at Cape Kennedy. The number of samples collected by division personnel for analysis decreased from the previous year; however, the number of laboratory analyses completed increased from 534 to 646. This increase was due to the greater number of samples submitted for analysis and identification by CHDs and other agencies.

Approximately four weeks were devoted to the training and orientation of county personnel in industrial hygiene techniques, instrumentation, and sampling procedures. The interest of the CHDs was encouraging.

As a result of the publicity given by the news media to the potential hazard of lead poisoning from certain imported ceramic drinking cups and mugs, several received from CHDs were tested.

Cups of blue and orange color imported from Japan with the label, Rossini, were found to contain excessive quantities of water soluble lead pigments on the interior surfaces. Other imported cups of various colors were tested including the Santa Claus style cups with red painted exteriors; only insignificant amounts of lead were found.

The laboratory, in cooperation with the Pennsylvania Health Department, participated in a special study, sponsored by the Committee on Environmental Factors in the Pneumoconiosis, American Conference of Governmental Industrial Hygienists, to standardize analytical methods for the determination of free silica in dust and other materials.

Division personnel have continued daily operation and maintenance of the high volume air sampler and precipitation collector for the collection of particulate and rainwater samples for the Radiation Surveillance Network sponsored by the USPHS.

### SUMMARY OF OCCUPATIONAL HEALTH ACTIVITIES
### FLORIDA, 1965

#### FIELD ACTIVITIES

| | |
|---|---|
| Number of persons or establishments given service | 71 |
| Workers employed | 6,380 |

| PERSONNEL VISITS TO PLANTS | |
|---|---|
| Self-initiated | 22 |
| Requests or complaints | 25 |
| Agency referrals | 4 |
| Revisits | 28 |
| Total | 79 |

| FIELD DETERMINATION OF ATMOSPHERIC CONTAMINANTS | |
|---|---|
| Perchlorethylene | 5 |
| Combustible gases | 4 |
| Hydrogen sulfide | 12 |
| Carbon Monoxide | 28 |
| Carbon Dioxide | 12 |
| Total | 61 |

| SERVICES RENDERED | |
|---|---|
| Routine inspection | 12 |
| Industrial hygiene survey | 31 |
| Technical study | 23 |
| Consultation | 41 |
| Follow-up | 18 |
| Discuss report | 19 |
| Non-occupational investigation | 6 |
| Total | 150 |

| PHYSICAL CONDITIONS | |
|---|---|
| Noise measurement | 89 |
| Temperature and relative humidity | 14 |
| Ventilation | 6 |
| Total | 109 |

#### SAMPLES COLLECTED FOR LABORATORY ANALYSIS

| | |
|---|---|
| Fluoride in air | 40 |
| Lead (15) Dust (16) in air | 31 |
| Biological for lead | 30 |
| Solvent for identification | 1 |
| Dust (for gravimetric analysis, $SiO_2$) | 5 |
| Ozone (8) Oxygen (7) in air | 15 |
| Oil mist-particulates | 7 |
| Total | 129 |

### LABORATORY ACTIVITIES

| Materials | Type of Sample | Source | Analyses |
|---|---|---|---|
| Lead | Human fluids and tissue | Physician, hospital, industry and State, Federal Agency | 265 |
| | Atmospheric, Ceramic, Paint, Water | Industry, State Agency | 34 |
| Fluorides | Atmospheric | Industry | 89 |
| | Biological fluids and tissue | State agency, Industry | 128 |
| Ozone | Atmospheric | Industry | 8 |
| Cobalt | Biological fluids | State agency | 2 |
| Free silica | Air, dust, materials | Industry, state agency | 13 |
| Dust counts | Atmospheric | Industry | 13 |
| Boiling points, pH, specific gravity | Biological fluids, solvents | Industry, state agency | 77 |
| Misc. Microscopic examination | Materials of unknown comp. | | 17 |
| | | Total | 646 |
| Blanks, controls, standards, reagents | | | 250 |
| | | Total | 896 |

### OCCUPATIONAL DISEASE REPORTS RECEIVED THROUGH FLORIDA INDUSTRIAL COMMISSION, 1965

| | | |
|---|---|---|
| Dermatitis by cause | | 164 |
| Detergents or other chemicals | 29 | |
| Cement | 32 | |
| Plants and vegetables | 4 | |
| Citrus | 14 | |
| Agricultural chemicals | 19 | |
| Larva migrans, fungus | 4 | |
| Seafoods, Other foods | 23 | |
| Paint, petroleum products, solvents | 14 | |
| Miscellaneous | 25 | |
| Systemic Poisoning by cause | | 23 |
| Parathion | 10 | |
| Chemical, excluding parathion | 11 | |
| Heat, exhaustion, infections, other conditions | 2 | |
| Conjunctivitis by cause | | 99 |
| Welders | 97 | |
| Other | 2 | |
| Miscellaneous | | 8 |

## DIVISION OF TUBERCULOSIS CONTROL

**DWIGHT J. WHARTON, M.D.**
**Director**

The primary responsibilities of this division continue with little change in objectives but considerable change in operational procedure. For many years emphasis has been upon the provision of assistance to each county health department (CHD) in carrying out the tuberculosis control program planned and executed according to conditions existing in that county. Most have expanded their programs during the past few years.

The change in operational procedure was brought about by a statewide tuberculosis control project financed by a grant from the U. S. Public Health Service (USPHS). This program, begun in 1962 in Dade County, now is functioning in eight counties as subprojects and an application is pending for the ninth county. The grant, part of a nationwide program planned for a ten year, or longer, period, provides funds for personnel, supplies and other items for use exclusively in a tuberculosis control program.

During the year a new "Guide for Tuberculosis Control Program" was prepared with assistance of public health nurses having special interest in control methods. The "Guide" emphasized adequate and uninterrupted chemotherapy for active cases and lifetime follow-up; prophylactic chemotherapy especially for reactors in household or other intimate contacts of an active case, and in those at high risk of developing the disease, regardless of age. The "Manual for the Tuberculosis Case Register" was prepared to provide detailed instruction for case register clerks in CHDs.

There is a continuing trend toward earlier discharge of patients from state hospitals thus increasing the post-hospital supervision of patients by CHDs. A few years ago most patients remained in the hospital until inactive status had been obtained. Now each one is discharged as soon as a good response to treatment and noninfectious status has been obtained. The earlier discharge practice is nationwide and has shown satisfactory results.

### MORBIDITY AND MORTALITY

Data on morbidity and mortality for the past 10 years are given in Table 25. There has been no significant decline in new case rate since 1959. This could be due to expansion of case detection efforts and better reporting; however, the fact remains that tuberculosis continues to be an important public health problem.

The provisional total for 1965 was 1521 new cases. When those reported in the last few months have been studied further, this figure will decrease. The provisional total for 1964 was 1407 but 39 of these had a diagnosis of disease other than tuberculosis giving a final total of 1368. The corrected case rate was 24.3 for 1964.

### CASE DETECTION

The state and national tuberculosis programs recommend priorities for case detection procedures and a reduction in programs which are less rewarding. This advice may have had some effect upon the number of new cases reported at the level of the past six years. In case detection, emphasis is upon examination of family and other close contacts.

During 1965, 1044 patients reported were admitted to tuberculosis hospitals and 93 were admitted but subsequently diagnosed as having other diseases, mostly due to atypical mycobacteria.

The yield of new cases from examination of 70 mm X-ray continued. State operated units had 1646 films in the suspicious category and 114 new cases reported. There are 240 under study with diagnosis reserved. In 1964, 100 new cases were reported from X-rays by state units and 36 more were reported from those still under study at the end of the year.

The state operated mobile units provide services to CHDs for such people as school employees, food handlers, barbers and cosmetologists. Since most of these have annual X-rays the yield is very low.

Combined operation of state and CHD 70mm X-ray units produced 753,935 satisfactory films with 4690 suspicious for tuberculosis. Diagnosis of active tuberculosis was made on 271 of these, and 879 are still under study with diagnosis reserved. There were 911 films showing evidence of tumor, 3041 indicated significant evidence of cardiovascular disease and 6587 other pathology.

### OTHER X-RAY SERVICES

The State Board of Health (SBH) provides X-ray film and other X-ray supplies to all counties for use in tuberculosis programs and processed and interpreted films for counties requesting this service. CHDs submitted 37,112 films of 14 x 17 size and 544,105 of 70mm size for interpretation. State operated units sent in 3741 14 x 17 size and 209,830 70mm size for processing and interpretation.

### ACTIVITIES OF CHDs

Contact with the public in the tuberculosis control program rests entirely with CHD personnel. Table 18 Section C gives data on major activities of CHDs and shows a tremendous volume of work which, for the most part, was of excellent quality. A total of 85,556 tuberculin tests was done by CHDs.

### CENTRAL CASE REGISTER

The central tuberculosis case register (CCR) is a living record of tuberculosis reporting by CHDs. In 1965, 1521 new patients were reported in Florida and 171, previously counted in other states, became Florida residents. Of the new residents, 81 with active disease and 77, recently inactive, were added to the registry giving a total of 1679 for the year. More cases have been removed from the CCR during recent years than have been added, with 1986 being removed in 1965 due to inactivity for three years, deaths, moving to another state and other causes.

Tables 27 and 28 show the status of the CCR at the end of the year. A complete review of the CCR was done by consultation with CHDs resulting in removal of many delinquent records. All of these involved considerable investigation to determine the cause of delinquency. The work load of CCR personnel has been increased by the recording of the results of better follow-up of patients by CHDs, a greater number of clinic visits, more X-ray and sputum examinations and recording of treatment. Expansion of the tuberculosis control program by the special projects will result in further increases in the CCR activities.

### TABLE 25

### NEW ACTIVE TUBERCULOSIS CASES AND TUBERCULOSIS DEATHS WITH RATE PER 100,000 POPULATION BY RACE, FLORIDA, 1956-1965

| YEAR | Cases Reported | Case Rate | TOTAL DEATHS | | WHITE | | NONWHITE | |
|---|---|---|---|---|---|---|---|---|
| | | | Deaths | Rate | Deaths | Rate | Deaths | Rate |
| 1965* | 1521 | 26.2 | 210 | 3.6 | 129 | 2.7 | 81 | 7.9 |
| 1964 | 1407 | 24.7 | 212 | 3.7 | 133 | 2.8 | 79 | 7.8 |
| 1963 | 1563 | 28.3 | 242 | 4.4 | 151 | 3.3 | 91 | 9.2 |
| 1962 | 1439 | 26.7 | 216 | 4.0 | 136 | 3.1 | 80 | 8.3 |
| 1961 | 1359 | 26.1 | 217 | 4.2 | 146 | 3.4 | 75 | 8.1 |
| 1960 | 1295 | 25.9 | 205 | 4.1 | 128 | 3.1 | 78 | 8.7 |
| 1959 | 1271 | 26.5 | 233 | 4.9 | 161 | 4.3 | 65 | 7.4 |
| 1958 | 1553 | 34.4 | 287 | 6.4 | 193 | 5.4 | 94 | 11.1 |
| 1957 | 1716 | 40.8 | 257 | 6.0 | 165 | 4.8 | 92 | 11.5 |
| 1956 | 1976 | 50.9 | 244 | 6.3 | 156 | 4.9 | 88 | 12.0 |

*Provisional Totals

## TABLE 26

## NUMBER AND PERCENTAGE OF REPORTED ACTIVE CASES OF TUBERCULOSIS BY STAGE OF DISEASE, RACE AND SEX, AND SOURCE OF REPORT, FLORIDA, 1964 AND 1965

| Stage of Disease, Race and Sex, Age, and Source of Report | 1965 | | 1964 | |
|---|---|---|---|---|
| | Case | Per Cent | Case | Per Cent |
| TOTAL ACTIVE CASES | 1521 | 100.0 | 1407 | 100.0 |
| STAGE OF DISEASE | | | | |
| Primary | 121 | 8.0 | 81 | 5.8 |
| Minimal | 194 | 12.7 | 193 | 13.7 |
| Moderately advanced | 567 | 37.3 | 538 | 38.2 |
| Far advanced | 498 | 32.8 | 470 | 33.4 |
| Non-pulmonary | 113 | 7.4 | 98 | 7.0 |
| Not stated | 28 | 1.8 | 27 | 1.9 |
| RACE AND SEX | | | | |
| White male | 589 | 38.7 | 587 | 41.7 |
| White female | 254 | 16.7 | 242 | 17.2 |
| Nonwhite male | 465 | 30.6 | 377 | 26.8 |
| Nonwhite female | 212 | 13.9 | 200 | 14.2 |
| Not stated | 1 | .1 | 1 | .1 |
| AGE | | | | |
| Under 5 | 63 | 4.1 | 58 | 4.1 |
| 5–14 | 57 | 3.8 | 48 | 3.4 |
| 15–24 | 124 | 8.1 | 96 | 6.9 |
| 25–44 | 432 | 28.4 | 463 | 32.9 |
| 45–64 | 592 | 38.9 | 496 | 35.2 |
| 65 plus | 249 | 16.4 | 245 | 17.4 |
| Not stated | 4 | .3 | 1 | .1 |
| SOURCE OF REPORT | | | | |
| Health department | 807 | 53.1 | 607 | 43.1 |
| Sanatoria | 110 | 7.2 | 59 | 4.2 |
| Private physicians | 384 | 25.3 | 484 | 34.4 |
| General hospitals | 110 | 7.2 | 107 | 7.6 |
| State mental hospitals | 18 | 1.2 | 17 | 1.2 |
| Death certificates | 22 | 1.4 | 26 | 1.9 |
| Other states | 8 | .5 | *...... | ....... |
| Other | 62 | 4.1 | 107 | 7.6 |

*Included in Other

## TABLE 27

## RESULTS OF 70mm X-RAY SCREENINGS, FLORIDA, 1965

| SCREENING UNITS | 70mm X RAYS | | FOLLOW-UP STUDIES | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | FINDINGS | | | NEW CASES FOUND BY STAGE | | | |
| | Total X Rays | Suspected Tuberculosis | Percent Follow-up | New Cases | Diagnosis Reserved | Minimal | Moderately Advanced | Far Advanced | *Other |
| TOTAL | 753,935 | 5,272 | 92.5 | 271 | 945 | 76 | 106 | 63 | 26 |
| Alachua HD | 10,296 | 48 | 100.0 | 4 | 9 | 0 | 1 | 1 | 2 |
| Baker Survey | 683 | 7 | 100.0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Bradford Sur. | 2,497 | 17 | 100.0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Broward HD | 60,378 | 557 | 96.6 | 3 | 230 | 1 | 0 | 1 | 1 |
| Broward Sur. | 5,907 | 65 | 85.9 | 12 | 6 | 2 | 3 | 7 | 0 |
| Calhoun Sur. | 1,650 | 14 | 100.0 | 1 | 1 | 0 | 0 | 0 | 1 |
| Charlotte Sur.** | 3,049 | 26 | 92.3 | 0 | 12 | 0 | 0 | 0 | 0 |
| Citrus Sur. | 795 | 6 | 100.0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Clay Sur. | 3,512 | 26 | 100.0 | 1 | 1 | 0 | 1 | 0 | 0 |
| Collier Sur. | 7,345 | 75 | 96.0 | 7 | 9 | 3 | 2 | 2 | 0 |
| Columbia Sur. | 509 | 3 | 100.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dade HD & Assn. | 111,972 | 1,201 | 93.5 | 20 | 102 | 0 | 13 | 7 | 0 |
| Dade Sur. | 9,456 | 86 | 88.4 | 6 | 11 | 1 | 1 | 3 | 1 |
| Duval HD & FSBH Emp. | 7,019 | 44 | 95.5 | 2 | 16 | 1 | 0 | 0 | 1 |
| Jacksonville City HD | 28,153 | 218 | 100.0 | 17 | 19 | 2 | 7 | 6 | 2 |
| Escambia HD | 14,810 | 76 | 100.0 | 13 | 5 | 5 | 4 | 4 | 0 |
| Escambia Sur. | 25,785 | 142 | 98.6 | 16 | 9 | 12 | 4 | 0 | 0 |
| Gadsden HD. | 1,704 | 14 | 92.9 | 1 | 4 | 0 | 0 | 0 | 1 |
| Gadsden Sur. | 4,761 | 30 | 70.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Glades Sur. | 1,395 | 5 | 100.0 | 1 | 0 | 1 | 0 | 0 | 0 |
| Gulf Coast TB Assn. | 28,722 | 444+ | Follow- | up not | reported | | | | |
| Hamilton Sur. | 351 | 5 | 100.0 | 1 | 0 | 1 | 0 | 0 | 0 |
| Hardee Sur.** | 1,159 | 8 | 37.5 | 1 | 0 | 0 | 1 | 0 | 0 |
| Hendry Sur. | 2,577 | 16 | 100.0 | 1 | 1 | 1 | 0 | 0 | 0 |
| Hernando Sur. | 444 | 3 | 100.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hillsborough HD & Assn. | 47,309 | 300 | 89.7 | 25 | 116 | 6 | 10 | 9 | 0 |
| Hillsborough Sur. | 27,250 | 140 | 90.0 | 13 | 49 | 3 | 7 | 3 | 0 |
| Holmes Sur. | 1,547 | 28 | 100.0 | 0 | 5 | 0 | 0 | 0 | 0 |
| Indian River Sur. | 8,102 | 48 | 83.3 | 5 | 9 | 1 | 4 | 0 | 0 |
| Jackson Sur. | 6,591 | 63 | 87.3 | 2 | 13 | 0 | 2 | 0 | 0 |
| Lake HD & Assn. | 2,231 | 10 | 100.0 | 0 | 3 | 0 | 0 | 0 | 0 |
| Lake Sur.** | 9,281 | 60 | 83.3 | 2 | 14 | 0 | 1 | 1 | 0 |
| Lee HD | 8,835 | 60 | 100.0 | 5 | 16 | 0 | 0 | 0 | 5 |
| Leon HD | 14,485 | 88 | 89.7 | 9 | 16 | 1 | 3 | 4 | 1 |
| Levy HD & Assn. | 2,822 | 33 | 100.0 | 1 | 8 | 0 | 1 | 0 | 0 |
| Levy Sur. | 318 | 6 | 100.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Liberty Sur. | 356 | 3 | 100.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Madison Sur. | 1,855 | 15 | 80.0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Manatee HD. | 6,978 | 51 | 100.0 | 7 | 11 | 1 | 1 | 3 | 2 |
| Marion HD & Assn. | 4,708 | 28 | 96.4 | 2 | 0. | 0 | 1 | 1 | 0 |
| Marion Sur.** | 8,692 | 43 | 81.4 | 3 | 5 | 2 | 0 | 0 | 1 |
| Monroe HD & Assn. | 29,527 | 12 | 100.0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Nassau Sur. | 3,925 | 31 | 90.3 | 0 | 5 | 0 | 0 | 0 | 0 |
| Okeechobee Sur. | 824 | 7 | 62.5 | 1 | 2. | 0 | 0 | 1 | 0 |
| Orange HD & Assn. | 45,630 | 125 | 98.4 | 4 | 16 | 0 | 4 | 0 | 0 |
| Orange Sur.** | 13,882 | 86 | 90.7 | 4 | 12 | 1 | 1 | 0 | 2 |
| Osceola HD. | 2,168 | 11 | Follow- | up not | reported | | | | |
| Osceola Sur.** | 1,640 | 17 | 70.6 | 0 | 6 | 0 | 0 | 0 | 0 |
| Palm Beach HD | 49,739 | 365 | 76.2 | 17 | 40 | 2 | 11 | 4 | 0 |
| Palm Beach Sur. | 12,639 | 128 | 90.6 | 8 | 26 | 3 | 4 | 1 | 0 |
| Pasco Sur. | 1,369 | 3 | 100.0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Pinellas HD | 27,522 | 211 | 95.3 | 7 | 68 | 1 | 4 | 2 | 0 |
| Polk HD | 29,200 | 141 | 95.0 | 20 | 22 | 9 | 9 | 1 | 1 |
| Putnam HD. | 723 | 3 | 100.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Putnam Sur. | 4,674 | 37 | 100.0 | 2 | 10 | 0 | 1 | 0 | 1 |
| St. Johns Sur. | 2,364 | 8 | 100.0 | 2 | 0 | 1 | 1 | 0 | 0 |
| St. Lucie HD | 278 | 6 | 83.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa Sur. | 2,644 | 14 | 100.0 | 1 | 2 | 1 | 0 | 0 | 0 |
| Sarasota HD | 3,577 | 28 | 89.3 | 1 | 3 | 0 | 0 | 0 | 1 |
| Seminole HD & Assn. | 1,382 | 1 | 100.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Seminole Sur.** | 6,904 | 36 | 80.6 | 2 | 11 | 0 | 0 | 2 | 0 |
| Sumter Sur. | 1,839 | 13 | 100.0 | 1 | 4 | 0 | 1 | 0 | 0 |
| Suwannee Sur. | 475 | 3 | 100.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Taylor Sur. | 3,477 | 26 | 73.0 | 2 | 3 | 1 | 1 | 0 | 0 |
| Union Sur. | 961 | 3 | 100.0 | 1 | 0 | 0 | 1 | 0 | 0 |
| Volusia Sur. | 2,864 | 14 | 100.0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Wakula Sur. | 338 | 0 | .... | .... | .... | .... | .... | .... | .... |
| Walton Sur. | 622 | 5 | 100.0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Mental Hospitals | 7,858 | 230 | 99.1 | 16 | 1 | 12 | 1 | 0 | 3 |
| State Prisons | 4,569 | 40 | 87.5 | 1 | 3 | 1 | 0 | 0 | 0 |

*Other, primary, miliary and stage unknown
**Survey ended in November and December 1965
+Suspects not included in total

## TABLE 28

## RESULTS OF STATE X-RAY SURVEY UNITS, FLORIDA, 1965

| RACE AND SEX AND AGE | 70 mm X-RAYS | | 14" x 17" X-RAY FOLLOW-UP | | | | | | *New Case Rate |
|---|---|---|---|---|---|---|---|---|---|
| | | | FINDINGS | | NEW CASES BY STAGE | | | | |
| | Total X-rays | Suspected Tuberculosis | New Cases | Diagnosis Reserved | Minimal | Moderately Advanced | Far Advanced | Other | |
| TOTAL | 209,830 | 1,638 | 114 | 240 | 20 | 49 | 39 | 6 | 54.3 |
| RACE AND SEX | | | | | | | | | |
| White male | 73,540 | 740 | 39 | 125 | 5 | 16 | 17 | 1 | 53.0 |
| White female | 83,719 | 396 | 17 | 55 | 0 | 11 | 3 | 3 | 20.3 |
| Nonwhite male | 25,872 | 320 | 38 | 41 | 13 | 9 | 15 | 1 | 146.9 |
| Nonwhite female | 24,167 | 160 | 17 | 14 | 1 | 12 | 3 | 1 | 70.3 |
| Not stated | 2,532 | 22 | 3 | 5 | 1 | 1 | 1 | 0 | 118.5 |
| AGE | | | | | | | | | |
| 0–24 | 31,710 | 70 | 12 | 10 | 1 | 5 | 2 | 4 | 37.8 |
| 25–34 | 38,017 | 124 | 22 | 19 | 4 | 12 | 6 | 0 | 57.9 |
| 35–44 | 42,358 | 221 | 22 | 20 | 8 | 7 | 6 | 1 | 51.9 |
| 45–54 | 38,784 | 340 | 25 | 44 | 4 | 14 | 7 | 0 | 64.5 |
| 55–64 | 30,492 | 401 | 21 | 62 | 3 | 7 | 10 | 1 | 68.9 |
| 65 and over | 26,765 | 458 | 11 | 81 | 0 | 3 | 8 | 0 | 41.1 |
| Not stated | 1,704 | 24 | 1 | 4 | 0 | 1 | 0 | 0 | 58.7 |

*Rate per 100,000 satisfactory 70mm x-rays

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## TABLE 29

## TUBERCULOSIS CASES IN CENTRAL REGISTER, BY COUNTY, STAGE OF DISEASE AND ACTIVITY, FLORIDA, 1965

| COUNTY | Total Cases | Pulmonary Tuberculosis | | | | Non-pulmonary | Active Cases | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | At Home by Sputum Status | | |
| | | Active | Quiescent | Inactive | Primary | | In Hospital | Positive | Negative | None 1965 |
| STATE | 7195 | 1449 | 954 | 4378 | 291 | 123 | 860 | 212 | 294 | 83 |
| Alachua | 129 | 15 | 14 | 96 | 2 | 2 | 9 | 1 | 3 | 2 |
| Baker | 19 | 4 | 5 | 8 | 1 | 1 | 2 | 1 | 1 | .... |
| Bay | 90 | 8 | 5 | 73 | 2 | 2 | 5 | .... | .... | 3 |
| Bradford | 35 | 3 | 7 | 22 | .... | 3 | 1 | .... | 1 | 1 |
| Brevard | 114 | 24 | 18 | 69 | 3 | .... | 8 | 3 | 10 | 3 |
| Broward | 451 | 79 | 66 | 259 | 41 | 6 | 51 | 11 | 15 | 2 |
| Calhoun | 23 | 5 | 3 | 15 | .... | .... | 4 | 1 | .... | .... |
| Charlotte | 20 | 4 | 6 | 10 | .... | .... | 4 | .... | .... | .... |
| Citrus | 12 | .... | 4 | 8 | .... | .... | .... | .... | .... | .... |
| Clay | 23 | 2 | 3 | 17 | 1 | .... | 1 | .... | 1 | .... |
| Collier | 66 | 21 | 7 | 34 | 4 | .... | 11 | 6 | 2 | 2 |
| Columbia | 36 | 8 | 1 | 26 | 1 | .... | 5 | 2 | 1 | .... |
| Dade | 1124 | 222 | 56 | 756 | 47 | 43 | 153 | 42 | 20 | 7 |
| DeSoto | 22 | 3 | 5 | 14 | .... | .... | 2 | 1 | .... | .... |
| Dixie | 8 | 2 | .... | 5 | 1 | .... | 2 | .... | .... | .... |
| Duval | 678 | 137 | 111 | 398 | 22 | 10 | 87 | 20 | 25 | 5 |
| Escambia | 219 | 44 | 31 | 140 | 3 | 1 | 28 | 3 | 9 | 4 |
| Flagler | 9 | 3 | .... | 5 | 1 | .... | 3 | .... | .... | .... |
| Franklin | 8 | 4 | 1 | 3 | .... | .... | 3 | .... | .... | 1 |
| Gadsden | 40 | 6 | 4 | 30 | .... | .... | 3 | .... | 2 | 1 |
| Gilchrist | 4 | 1 | 2 | 1 | .... | .... | .... | .... | 1 | .... |
| Glades | 4 | 1 | 2 | 1 | .... | .... | .... | .... | 1 | .... |
| Gulf | 16 | 1 | .... | 15 | .... | .... | 1 | .... | .... | .... |
| Hamilton | 17 | 2 | 5 | 9 | 1 | .... | 1 | .... | 1 | .... |
| Hardee | 16 | 2 | 4 | 10 | .... | .... | 2 | .... | .... | .... |
| Hendry | 16 | 3 | 3 | 9 | 1 | .... | 1 | 1 | 1 | .... |
| Hernando | 15 | 2 | 5 | 7 | 1 | .... | 2 | .... | .... | .... |
| Highlands | 58 | 17 | 6 | 32 | 3 | .... | 11 | 2 | 2 | 2 |
| Hillsborough | 841 | 195 | 104 | 507 | 26 | 9 | 130 | 15 | 42 | 8 |
| Holmes | 17 | 1 | 3 | 13 | .... | .... | 1 | .... | .... | .... |
| Indian River | 67 | 16 | 9 | 38 | 2 | 2 | 6 | 5 | 5 | .... |
| Jackson | 66 | 7 | 15 | 40 | 2 | 2 | 2 | .... | 2 | 3 |
| Jefferson | 8 | .... | 1 | 6 | 1 | .... | .... | .... | .... | .... |
| Lafayette | 3 | 1 | 1 | 1 | .... | .... | 1 | .... | .... | .... |
| Lake | 104 | 25 | 13 | 60 | 5 | 1 | 18 | 2 | 3 | 2 |
| Lee | 99 | 23 | 17 | 51 | 8 | .... | 13 | 7 | 1 | 2 |
| Leon | 67 | 9 | 10 | 46 | 2 | .... | 7 | .... | 1 | 1 |
| Levy | 19 | 2 | 4 | 13 | .... | .... | 1 | .... | 1 | .... |
| Liberty | 10 | 3 | .... | 7 | .... | .... | 1 | .... | .... | 2 |
| Madison | 20 | 4 | 2 | 13 | 1 | .... | 3 | .... | .... | 1 |
| Manatee | 75 | 24 | 12 | 34 | 4 | 1 | 13 | 4 | 7 | .... |
| Marion | 84 | 19 | 12 | 50 | 2 | 1 | 10 | 3 | 6 | .... |
| Martin | 43 | 10 | 9 | 23 | 1 | .... | 5 | .... | 5 | .... |
| Monroe | 39 | 8 | 10 | 20 | 1 | .... | 4 | 2 | 2 | .... |
| Nassau | 17 | 2 | 2 | 11 | .... | 2 | 1 | .... | 1 | .... |
| Okaloosa | 43 | 3 | 5 | 35 | .... | .... | 2 | .... | 1 | .... |
| Okeechobee | 8 | 1 | 2 | 3 | 2 | .... | 1 | .... | .... | .... |
| Orange | 226 | 51 | 35 | 114 | 19 | 7 | 26 | 8 | 17 | .... |
| Osceola | 25 | 7 | 5 | 12 | .... | 1 | 1 | 4 | 2 | .... |
| Palm Beach | 468 | 71 | 105 | 251 | 31 | 10 | 45 | 7 | 19 | .... |
| Pasco | 45 | 9 | 11 | 24 | 1 | .... | 6 | 1 | 1 | 1 |
| Pinellas | 400 | 127 | 29 | 231 | 8 | 5 | 47 | 28 | 38 | 14 |
| Polk | 288 | 53 | 44 | 164 | 22 | 5 | 27 | 12 | 14 | .... |
| Putnam | 49 | 10 | 7 | 31 | 1 | .... | 6 | 1 | 3 | .... |
| St. Johns | 58 | 4 | 10 | 42 | 1 | 1 | 4 | .... | .... | .... |
| St. Lucie | 107 | 20 | 24 | 62 | 1 | .... | 12 | 2 | 3 | 3 |
| Santa Rosa | 18 | 3 | 2 | 13 | .... | .... | 2 | .... | 1 | .... |
| Sarasota | 119 | 21 | 11 | 81 | 4 | 2 | 11 | 5 | 3 | 2 |
| Seminole | 120 | 18 | 19 | 80 | 1 | 2 | 8 | 4 | 5 | 1 |
| Sumter | 30 | 3 | 5 | 22 | .... | .... | 2 | .... | 1 | .... |
| Suwannee | 35 | 8 | 5 | 21 | .... | 1 | 4 | 2 | 1 | 1 |
| Taylor | 29 | 6 | 3 | 17 | 3 | .... | 4 | .... | 1 | 1 |
| Union | 6 | 1 | 2 | 3 | .... | .... | .... | .... | .... | 1 |
| Volusia | 161 | 41 | 26 | 85 | 6 | 3 | 21 | 6 | 10 | 4 |
| Wakulla | 5 | 1 | 1 | 3 | .... | .... | 1 | .... | .... | .... |
| Walton | 29 | 4 | 3 | 22 | .... | .... | 3 | .... | 1 | .... |
| Washington | 27 | 3 | 2 | 22 | .... | .... | 1 | .... | .... | 2 |
| Florida Prisons | 48 | 12 | .... | 35 | 1 | .... | 10 | .... | 1 | 1 |

## TABLE 30

### TUBERCULOSIS CASE REGISTER STATISTICS, FLORIDA, 1961-1965

| Tuberculosis Cases by Activity, Location and Sputum Status | Number of Cases | | | | | Per Cent Distribution | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1965 | 1964 | 1963 | 1962 | 1961 | 1965 | 1964 | 1963 | 1962 | 1961 |
| TOTAL CASES IN REGISTER | 7195 | 7502 | 7620 | 7694 | 9627 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Active pulmonary | 1449 | 1552 | 1688 | 1790 | 1785 | 20.1 | 20.7 | 22.1 | 23.3 | 18.6 |
| Quiescent | 954 | 987 | 896 | 817 | 582 | 13.2 | 13.2 | 11.8 | 10.6 | 6.0 |
| Inactive pulmonary | 4378 | 4525 | 4589 | 4765 | 6971 | 61.0 | 60.3 | 60.2 | 62.0 | 72.4 |
| Primary | 291 | 304 | 324 | 250 | 211 | 4.0 | 4.0 | 4.3 | 3.2 | 2.2 |
| Non-pulmonary | 123 | 134 | 123 | 72 | 78 | 1.7 | 1.8 | 1.6 | .9 | .8 |
| ACTIVE PULMONARY | 1449 | 1552 | 1688 | 1790 | 1785 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Hospitalized | 860 | 1026 | 1202 | 1240 | 1272 | 59.3 | 66.1 | 71.2 | 69.3 | 71.3 |
| At home | 589 | 526 | 486 | 550 | 513 | 40.7 | 33.9 | 28.8 | 30.7 | 28.7 |
| ACTIVE CASES AT HOME | 589 | 526 | 486 | 550 | 513 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Positive sputum | 212 | 198 | 140 | 130 | 164 | 36.0 | 37.6 | 28.8 | 23.6 | 32.0 |
| Negative sputum | 294 | 256 | 274 | 298 | 222 | 49.9 | 48.7 | 56.4 | 54.2 | 43.3 |
| Undetermined sputum | 83 | 72 | 72 | 122 | 127 | 14.1 | 13.7 | 14.8 | 22.2 | 24.7 |

## DIVISION OF VETERINARY PUBLIC HEALTH

JAMES B. NICHOLS, D.V.M., M.S.
Director

The division continued to carry out the duties and responsibilities associated with the control, study and surveillance of those animal diseases transmissible to man. There was only one staff change and it was important — the addition of a biologist. The division had been without the services of a biologist since early in 1963, and a person professionally qualified particularly in the field of wildlife always has been essential for the proper discharge of assigned responsibilities.

In order to continue the improvement of the morbidity reporting system, personal contacts, questionnaires and other available means of locating new veterinarians were used to compile a current roster. This resulted in increasing the number of those participating in the reporting system by more than 40 per cent.

*Brucellosis* — Four confirmed human cases of brucellosis were reported during the year. One patient had worked a short time in a meat plant in Iowa before he became ill; another in a hog slaughtering establishment in Florida. The third patient had a history of drinking raw milk from a cow that had proved non-reactive to a brucellosis test shortly before the onset of the illness. In addition, the third patient had contact with hogs kept on the premises and had been involved with the slaughtering and dressing of a beef. It could not be determined where the fourth person had contracted the illness.

The number of human cases each year is indeed small when one considers that only a relatively small part of the state has attained a modified-certified status with regard to bovine brucellosis.

This division assists the United States Department of Agriculture (USDA) and the State Department of Agriculture (SDA) in the cooperative program to control and eradicate brucellosis. The USDA reported that 7316 herds consisting of 202,961 cattle were tested during the year. Of these, 2343 showed positive reactions. In addition, 46,871 market cattle tested revealed 1657 positive reactors. The number of reactors in percentages was considerably lower than last year. In the swine testing program, 281 herds were examined and 40 were found to be infected with 139 positive reactors.

The Brucellosis Ring Test (BRT) performed by State Board of Health (SBH) laboratories for a number of years on routinely submitted milk samples was discontinued in June. The many thousands of tests helped immeasurably in the USDA brucellosis eradication program. This testing responsibility was fully assumed by the USDA and a provision has been made whereby County Health Departments (CHD) could continue to submit milk samples for the BRT any time it was considered appropriate.

*Arthropod-borne Encephalitis* — Participating in the statewide encephalitis surveillance program accounted for a high percentage of the total man hours expended on zoonotic disease control. In continuing last year's program, various animal sentinels were used in an effort to determine the amount of viral activity throughout the state.

All private veterinarians known to conduct equine practice were requested to report each clinically diagnosed case as quickly as possible by telephone. A request also was made that blood specimens be collected and submitted to the SBH laboratory, Jacksonville, for hemagglutination-inhibition (HI) testing to determine if the clinically diagnosed cases could be confirmed. Information on all cases was immediately transmitted to the Bureau of Entomology in order that arrangements could be made to trap mosquitoes in the areas. The HI testing program was considered successful as the study of the titers proved very helpful. A total of 46 equine cases were reported during the year; 23 were confirmed by HI test, and six by the examination of brain specimens. All laboratory confirmed cases were Eastern equine encephalitis (EEE). The reporting was excellent.

The total number of equine cases was not great when compared to other years; however, there was a significant epizootic in the Jacksonville area. Preceded by an outbreak in chukar partridges at a large game farm, a total of 18 horse cases were recorded in a matter of three weeks. Even though the virus circulated in quantity, only one laboratory confirmed human case occurred.

The collection of blood specimens from backyard chicken flocks was initiated in December, 1964, and continued into the spring months so that as much of the state as possible could be checked for arbovirus activity which took place during the 1964 mosquito season. In 11 counties, 245 chickens from 31 flocks hatched out no earlier than January 1, 1963, were bled. An effort was made to collect specimens in counties where equine cases had not been reported. The absence of EEE reactivity in both horses and chickens was noted with interest. Some St. Louis encephalitis (SLE) reactivity was found in the southwest counties; this was the first noted in several years.

For the first time, horses were used as SLE sentinels, with blood specimens being collected by private veterinarians and by one SDA veterinarian. Specimens also were obtained from the SDA Animal Disease Diagnostic Laboratory at Kissimmee. While it was difficult at first to find animals negative to SLE, the non-reactive animals which were tested periodically throughout the summer and fall remained negative for SLE.

To further extend encephalitis surveillance of the state, three chicken flocks consisting of 15 birds each were placed in the Jacksonville and Orlando areas. Blood specimens were obtained every three weeks, and only a small amount of EEE reactivity was observed.

The various animals used as sentinels at selected locations provided good surveillance. These, of course, were supplemented by wildlife surveys which are described under the biologist's activities.

*Leptospirosis* — A total of 127 cases was reported in large animals and 333 cases in small animals, representing a sizeable increase over last year which is due in part to better reporting. Leptospirosis is not an important disease in humans, but two cases were confirmed and they were investigated. One occurred in a river dredge boat operator who used questionable sources of water for drinking; the other was in a person who walked along the shore and fished in a small lake around which rats had been seen. Several persons having low titers were suspect but additional study did not result in positive diagnoses.

*Rabies* — Laboratory confirmed cases of rabies totaled 78 for the year. This was a decline over the annual rate for the past two years. The greatest drop was noted in racoons and it appears that the epizootic in these animals which has existed for several years is gradually disappearing. The decline was first observed in the fall of 1964.

The number of positive infected dogs and cats reported remained quite low. Most of the larger cities and many counties have rabies ordinances or laws; however, there is always some concern about the areas which do not have such protection. It was gratifying to note that several additional counties obtained local rabies control laws during the last session of the legislature. Upon occasion there also has been concern about the lack of enforcement in some parts of the state.

Bats lead all other species in the number of positive rabies cases reported. They are dangerous especially where children are involved, as youngsters may not be able to differentiate between a bat and a bird. News media is frequently used to warn the public about wildlife rabies, especially in bats.

Vaccination of pets is encouraged by every possible means of communication; news media being used whenever there is an opportunity. CHD personnel are requested to conduct educational campaigns on rabies control and to emphasize annual vaccinations. Private veterinarians are encouraged at meetings and by personal contact to participate in rabies control programs at local levels.

The importation and subsequent sale of baby skunks by wholesale animal dealers is creating a problem in the spread of rabies. A survey of the larger dealers was conducted late in the year and plans have been formulated for further study and the need for possible control.

Sufficient vaccine for 468 14-dose treatments was distributed to CHDs for administration to persons who had been bitten by animals suspected of having rabies. As to type, the vaccine included 189 Semple (nerve tissue) and 279 duck embryo. A total of 222 vials of hyperimmune serum also was distributed.

*Bovine Tuberculosis* — The bovine tuberculosis control program conducted by the USDA and the SDA encompassed the testing of 2565 herds involving 207,117 cattle. There were 58 reactors — a smaller number than noted last year.

The importation of milk from states requiring less frequent testing than the annual test specified for Florida dairy cattle brought inquiries from the SDA dairy division concerning the necessity for continuing the annual TB test. An extensive study was undertaken by division personnel to determine the actual requirements of health and agriculture departments in those states between Florida and Wisconsin, most of which are potential suppliers to this state. Other agencies and organizations including the United States Public Health Service (USPHS), the USDA, CHDs and the Florida State Veterinary Medical Association were contacted for their views on the advisability of continuing the annual TB test. When all information received was tabulated and carefully reviewed, the consensus was that the presently required test for Florida dairy cattle should be continued, and that a similar requirement for producers in other states regularly shipping milk to Florida would not be unreasonable. The principal reason for continuing the annual test is that most replacements are obtained from out of state, and a lack of control in respect to dealers and others handling these cattle could result in the rapid spread of infection throughout existing herds. The legal sale of raw milk was considered another reason for continuing the annual test.

## WILDLIFE BIOLOGY

Primarily the biologist's activities have been concerned with wildlife studies in the surveillance and control of the arthropod-borne encephalitis.

A number of cases of EEE in horses, humans and chukar partridges occurring throughout the summer and early fall provided a basis for the selection of study areas. More than 400 blood specimens were collected from wild birds, mammals and other vertebrates which were suspected of being involved in the circulation of arboviruses. The HI testing of these sera by the SBA central laboratory showed evidence of past infection in 12 species of birds.

The central laboratory has inoculated a number of blood and tissue specimens from these wild birds and mammals into suckling mice in an attempt to isolate an arbovirus. As of the end of the year, no viral agent had been found.

## MILK SANITATION

In further efforts toward securing the highest quality milk for all consumers, several approaches were used by dairy consultants. More contacts and advisory field visits with CHD personnel were made to dairy establishments to increase effectiveness of programs. Cooperation of schools and other tax-supported institutions were sought and secured in purchasing dairy products only from sources maintaining a rating of 90 per cent or higher.

As lines of communication are more firmly established between purchasers and suppliers, greater incentives are being developed by the dairy industry to deliver higher quality products. Effectiveness of this program will continue to increase.

An effective date of January, 1966, was set by the USPHS for approving the use of fluid dairy products by common carriers from only processors which maintain a sanitation compliance rating of 90 per cent or higher. This affects both production and processing of these products. Since practically every dairy processing plant and its producers in the state are involved, a concentrated effort has been made to help industry be prepared for this forward step. A total of 31 sanitation compliance surveys of plants and their producers has been completed; of these, 29 were found satisfactory. Close cooperation on the part of industry, CHD personnel and dairy specialists of the SDA has added impetus to the effectiveness of these surveys. This phase of milk consultants' activities has resulted in the movement of higher quality dairy products in both intra and inter-state channels.

There are two areas which still need further attention to provide greater consumer protection. These are securing legislation requiring pasteurization of all market milk, and elimination of unsanitary conditions which are prevalent in the handling of coffee cream and similarly-used products in food service establishments. Considerable interest is being shown by various groups in the first area. Data are being collected to emphasize existing public health hazards in the second one. These findings will be used in seeking permanent corrections.

### SUMMARY OF ACTIVITIES OF MILK CONSULTANTS FOR 1965

| | |
|---|---|
| Visits to counties | 134 |
| Dairy farm inspections | 796 |
| Processing plant inspections | 59 |
| Frozen desserts plant inspections | 19 |
| Dairy farm plans reviewed | 9 |
| Processing plant plans reviewed | 3 |
| Participation in industry employee training schools | 3 |

## TABLE 31

### NUMBER OF CASES OF ANIMAL RABIES BY COUNTY, SPECIES AND MONTH, FLORIDA, 1965

| COUNTY | Dog | Cat | Fox | Raccoon | Skunk | Bat | Horse | Bobcat | Total |
|---|---|---|---|---|---|---|---|---|---|
| Alachua | ...... | 1 | ...... | 3 | ...... | ...... | ...... | ...... | 4 |
| Brevard | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | 2 |
| Charlotte | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 |
| Columbia | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 |
| Dade | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | 2 |
| DeSoto | ...... | ...... | ...... | 1 | 1 | ...... | ...... | ...... | 2 |
| Duval | 1 | ...... | ...... | ...... | ...... | 2 | ...... | ...... | 3 |
| Gilchrist | 1 | ...... | ...... | ...... | 2 | ...... | ...... | ...... | 3 |
| Hardee | ...... | ...... | ...... | 3 | ...... | ...... | ...... | ...... | 3 |
| Hendry | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 |
| Highlands | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 |
| Hillsborough | 1 | ...... | ...... | ...... | ...... | 25 | ...... | ...... | 26 |
| Jefferson | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 |
| Lafayette | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | 1 |
| Lee | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 |
| Madison | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | 2 |
| Manatee | ...... | ...... | ...... | ...... | ...... | 4 | ...... | ...... | 4 |
| Marion | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | 2 |
| Orange | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 |
| Pinellas | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | 2 |
| Polk | 1 | ...... | ...... | 1 | ...... | 1 | ...... | ...... | 3 |
| Putnam | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 |
| St. Johns | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | 1 |
| Sarasota | ...... | ...... | ...... | ...... | ...... | 5 | ...... | ...... | 5 |
| Sumter | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 |
| Taylor | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 |
| Volusia | ...... | ...... | ...... | 2 | ...... | ...... | ...... | ...... | 2 |
| Wakulla | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 |
| MONTH | | | | | | | | | |
| January | ...... | ...... | ...... | 3 | ...... | 1 | ...... | ...... | 4 |
| February | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 |
| March | 1 | ...... | ...... | 3 | ...... | 1 | ...... | ...... | 5 |
| April | ...... | ...... | ...... | ...... | 1 | 7 | ...... | ...... | 8 |
| May | ...... | ...... | ...... | 3 | 1 | 6 | ...... | ...... | 10 |
| June | ...... | ...... | ...... | 5 | 1 | 1 | ...... | ...... | 7 |
| July | 2 | ...... | ...... | 6 | ...... | 8 | ...... | ...... | 16 |
| August | ...... | 1 | ...... | ...... | ...... | 6 | ...... | ...... | 7 |
| September | 1 | ...... | ...... | 2 | 1 | 6 | ...... | ...... | 10 |
| October | ...... | ...... | ...... | 2 | ...... | 2 | ...... | ...... | 4 |
| November | ...... | ...... | ...... | 3 | ...... | ...... | ...... | ...... | 3 |
| December | ...... | ...... | ...... | 3 | ...... | ...... | ...... | ...... | 3 |
| TOTALS | 4 | 1 | 0 | 31 | 4 | 38 | 0 | 0 | 78 |

## BUREAU OF RESEARCH

ALBERT V. HARDY, M.D., Dr.P.H.
Director

The conduct of research in the State Board of Health (SBH) is regarded as one of the responsibilities of the operating bureaus, divisions and local health departments. The Bureau of Research is available to aid, coordinate and foster the development of research. The research in progress is described with other activities of operating bureaus and divisions. An overview of the total research program is provided here.

The support of research is derived from research grants, state appropriations specifically for research, and, where research is a part of operating programs, from the assignment of personnel to research, usually on a part-time basis. Grant funds expended for research in the fiscal year terminating June 30, 1965, amounted to approximately $650,000. Adding to this the state funds appropriated and used for research, the total funds identified for research were about an even one million dollars. There is no secure basis for determining the cost to operating budgets of personnel time devoted to research. As an example, the director of the Division of Epidemiology is the principal investigator on the grant supported research on Unclassified Mycobacteria. Also, studies of the Chironomidae in Florida under the joint direction of the biologists in the Bureaus of Entomology and Sanitary Engineering are recognized internationally for their high quality. So the total commitment to research by the SBH is substantially in excess of the one million dollars annually.

A major component of the SBH research is conducted in two research centers with related and overlapping interests. The Entomological Research Center in Vero Beach is the older and larger. The Encephalitis Research Center in Tampa is now in its third year. In both of these, attention is directed to the mosquito vector. The Bureau of Laboratories and the Divisions of Epidemiology and Veterinary Public Health participate in these studies in their areas of interest. One of the functions of the director of the bureau is to assure effective and smooth cooperation. This has been attained during the past year under review through periodic joint staff meetings and through the counsel and guidance of an advisory committee of national experts. The staffs in these two centers give their undivided time to research, a condition which contributes to the sound progress and the high quality of the studies in these research organizations.

The remainder of the SBH research is distributed among multiple bureaus, divisions and local health departments. During the year, the director of this bureau gave substantial time to Pinellas County Health Department, aiding in completion of the report of its prolonged study of Public Health Programs for the Aged. The extensive report is in manuscript form and due for publication as a SBH monograph early in 1966.

The Community Studies in Pesticides were gradually expanded during the year. There was consultation on the further development of research related to radiological health. Laboratory and epidemiological studies were of particular interest with major studies on the sanitary quality of salad type foods and the epidemiology of the unclassified mycobacteria infections. In these varied studies the Bureau of Research provided consultive and other assistance.

During the year the position of technical research writer was established. A medical editor with long experience was appointed to this position and designated as associate director of the bureau. The work in this field rapidly increased. Full responsibility was assumed for the SBH monographs. The eighth in this series "Developmental Education Clinics" was published during the year and the ninth, and longest to date, "Public Health Programs for the Aged," was in press at the end of the year. A progressively increasing amount of time of the technical research writer is being requested for the review and revision of scientific papers in preparation and of technical SBH releases.

During the year, at the request of the Department of Defense, the director of this bureau was one of a three-person team of consultants who reviewed and advised on Research on Enteric Infections in the Navy Research Laboratory in Cairo, Egypt, The Army SEATO Laboratory in Bangkok, Thailand, and in the Clark Air Force Base in the Phillipines. They also investigated the problem of diarrhea and dysentery among American military personnel in Viet Nam. During this three month leave of absence, Dr. James Bond provided the research consultation normally given by the director of this bureau.

The director, associate director and secretary comprise the staff working in the bureau. However, there are 40 persons on the payroll of the bureau, all but three of whom are assigned to research in other bureaus, divisions and local health departments.

## BUREAU OF SANITARY ENGINEERING

DAVID B. LEE, M.S., Eng.
Director

SIDNEY A. BERKOWITZ, M.S., Eng.
Assistant Director

Annual reports of this bureau in past years have established the areas of concern and the accomplishments as well as the difficulties in carrying out assigned responsibilities. Expanding environmental engineering problems approach higher plateaus. The detailed reports of field staff and the divisions which follow reflect the achievements during the year.

Increased public awareness of environmental pollution control needs were reflected in the actions by the Congress in programs developed both for cleaner air and cleaner waters. In the clean water program some increased surveillance was achieved but the public demands were not fully satisfied. Until we have adequate resources, both the central office and field operations will continue to conduct "fire-fighting" procedures and not be too effective in the total picture. Considerable discussion and programming continue to be a major topic among senior staff and hopefully this will bear fruit in future years.

### CENTRAL FLORIDA REGION

During the year the central Florida regional staff was increased by the addition of a chemist and laboratory technician. This greatly improved the activities of the regional program in water quality management. In the near future, it is anticipated that a biologist can be added to the staff to improve these activities in the biological discipline of water quality management.

With the increase in staff, considerable progress was made in the backlog of routine work in water plant inventories, final construction reports of waste water treatment plants and swimming pool operating permits.

The principal work of the new chemist and laboratory technician consisted of making surveys relative to the efficiency of existing domestic and industrial waste treatment facilities. In the majority of these surveys, the actual collection of samples was carried on by personnel of the regional office. In addition, assistance was given to treatment plant operators, both in the central regional laboratory and in the field, regarding sampling and analysis techniques. Considerable sampling was done and analyses performed relating to alleged pollution and fish kills.

An item of considerable interest is the chemical and bacteriological survey of Silver Springs, Silver Run and Oklawaha River for background data prior to construction of the Cross-State Canal.

Some major activities of the regional staff includes 164 visits to water treatment plants, 82 inspections of water supply wells, 124 swimming pool inspections, 198 visits to waste water treatment plants and 59 visits to industrial waste treatment plants.

### NORTHEAST REGION

The Jacksonville regional staff spent a considerable amount of time this past year concentrating on pollution surveys.

Pollution surveys conducted entirely by the regional staff include those run on the Ribault River, Intracoastal Waterway, Lake Wonderwood, all in Duval County. In addition, a water pollution survey was conducted on the entire Suwannee River basin, from the Florida-Georgia line to the Gulf of Mexico. This was comprehensive and time consuming. The primary purpose was to obtain background data of this stream as it existed prior to the operation of the Occidental phosphate mine. In addition, the survey covered a short period of time after the mining operation started.

An ambient air pollution survey is still being conducted in the area of the mining operation. This phase of the project was a cooperative effort between this office and personnel of the Division of Industrial Waste.

Water Pollution surveys were run on the Ribault River in order to update the records. This survey indicated the gross pollution of Ribault River and further indicated the sources of pollution, most of which came from the industrial plants discharging their waste into the Ribault River or its tributaries. These industries were furnished copies of this report and have taken steps to correct this situation. Many conferences with the management and their engineers were held in this connection.

In cooperation with the Division of Special Services, a shoreline survey was conducted in St. Johns and Flagler Counties. The purpose was to determine, if possible, the sources of pollution to the oyster harvesting areas in these two counties as a result of the 1964 survey.

Activities have also included cooperating and assisting the Public Health Service (USPHS) personnel in conducting both their air and water sampling surveys in Nassau County. Many conferences and meetings were held with USPHS representatives as well as with management of industry in Fernandina Beach. The laboratory personnel continue to collect samples for the radiological monitoring program in this region. They also have assisted in air and water surveys in other areas.

Approximately 98 sets of plans for sewage treatment plants were received by the regional office in the past year and 86 were approved. This represents a total sum of $225,000 estimated cost of facilities installed.

The above mentioned projects were conducted in addition to the normal work load of inspecting and receiving the operation reports of the public water and sewerage facilities. In Duval County alone there are approximately 110 public water plants and 81 sewage treatment plants serving subdivisions and municipalities. In addition to this number of sewage treatment plants, there are 156 small package plants serving commercial establishments of one kind or another. Due to the large number of water and sewage treatment plants, routine inspections are not carried on but as time permits and necessity dictates.

Forty-two new pools were issued permits this past year.

This office has been active in the planning committee for both Region I and II Annual Regional Short School. Lectures were given and many of the Florida Water and Sewage Works Operators Association meetings attended.

Many conferences were held with city, county and developers in regard to proposed water or sewerage facilities proposed as well as to review the status of their facilities in the light of possible expansion or to up-grade their treatment.

A considerable amount of time has been spent this past year with problems arising from the development of interchanges on Highway Interstate 75 in the vicinity of Lake City and Jasper. The number of motel and restaurant complexes and their volume of business have far exceeded their expectations. This unexpected growth also involved the engineer designing the sewerage facilities. Many problems have occurred with the operation of these plants and resulted in countless numbers of visits and telephone calls. This growth is expected to increase.

### PENSACOLA REGIONAL STAFF

The Pensacola regional staff continued its program in 1965, performing its two basic functions: water quality management and regional engineering assistance. A program of baseline type surveys, coupled with routine evaluations of selected water quality stations, was continued. Evaluations of the Ochlockonee River and Marcus Creek were the two major areas studied. Also included in this was revaluation of the conditions of the Escambia and Blackwater Rivers. The above studies, along with quarterly and semi-annual evaluations of major locations in all the other drainage basins, constituted the routine water quality studies.

Of major effort was the program of stream monitoring in Northwest Florida. In 1965 the installation of Protech type monitors at Neal's Landing on the Chattahoochee River; at Jim Woodruff's Dam Power House below Lake Seminole; and at the Highway 2 Bridge in Gadsden County on the Ochlockonee River, was completed. A continuous type analyzing and recording ph meter installation was completed in the latter part of the year and equipment for this location will be installed in January, 1966. The units mentioned above, along with the existing one on the Escambia River, bring the total of monitor stations in Northwest Florida to four. In addition there are two national water quality network stations and one continuous ph recording station.

Even though the monitor units are considered automatic, a considerable amount of time and utilization of personnel was required to service and maintain the units. This was especially true due to the fact that initial installation and careful calibration of the instruments required an extra effort during startup. It is anticipated that in 1966 there will be an improvement in the routine required for this program.

The basic functions and projects of the regional engineering program included approval of 25 waste water projects; processing of 5340 public water analyses reports; 17 fish kill investigations and investigation of numerous complaints.

### WINTER HAVEN REGIONAL STAFF

The Winter Haven regional staff continued its ongoing programs in its two basic disciplines: water quality management and regional engineering assistance. The staff conducted 13 special studies involving biological, bacteriological and chemical investigations of lakes, streams and waste treatment facilities. Staff efforts continue in the Parathion incident on the Peace River which occurred in late 1964, and early 1965.

A number of fishkills were investigated in Polk and surrounding counties. Resultant kills were attributed to a control kill, citrus waste, sugar mill waste and phosphate slimes.

In addition to the above special activities, the routine sampling of the Peace, Alafia, Hillsborough, Withlacoochee Rivers and the headwaters from four additional watersheds that make up some of these rivers, continued. The sampling periods vary from weekly to quarterly depending on the pollution potential of each watershed.

The laboratory again accepted five high school students in continued cooperation with the Winter Haven High School Research-Science Program which is a part of the students' overall chemical, physical and biological subjects in high school. They spend three afternoons a week on special projects assigned by the supervising chemist and biologist in the laboratory.

Personnel from the Winter Haven office participated in five training courses for sewage treatment plant operators, sanitarians, and food technologists. They were active in contributing to the training of chemists from industry and three county health departments. Monthly meetings of the Peace River Basin Board and the Southwest Florida Water Management District were attended to assist in their program and keep abreast of current activities. Also during the year members of the staff appeared before a grand jury with regard to pollution abatement of the Alafia River.

Technical and general speeches were delivered concerning pollution for informing the public and/or public relations.

### Financial Aid for Waste Treatment Construction

The financial aid provided through the Federal Water Pollution Control Act continued to be an impetus to the construction of sewage treatment facilities for municipalities.

### FISCAL YEAR 1956-66

| | |
|---|---|
| Federal allotment for fiscal year 1965-66 | $ 3,115,180.00 |
| Unencumbered funds from allotments for previous fiscal years | 1,230,000.00 |
| Total amount available to applications qualifying for a grant for the current fiscal year | 4,345,180.00 |
| Number of applications received (Of these 18 were new applications and 14 were letters from unsuccessful applications of previous fiscal years requesting reconsideration of original applications or new projects) | 32 |
| Estimated costs of overall projects | 31,722,626.00 |
| Federal grants requested | 5,377,420.00 |
| Per cent of costs for which grants were requested | 17 |

Assistance provided from this source was made by the USPHS to Bear Creek Sanitary District, Boca Ciega Sanitary District, Cape Canaveral, Deerfield Beach, Ft. Walton Beach, Indian Rocks Beach, Kissimmee, Leesburg, Marianna, McKay Creek Sanitary District, Naples, Pensacola, St. Petersburg and Umatilla. Favorable consideration is based on readiness to proceed with construction and other specified priority factors.

### TABLE 32

### ENGINEERING LABORATORIES ANALYSES BASIC WATER QUALITY DATA, FLORIDA, 1965

| LABORATORY | Dissolved Oxygen | Biochemical Oxygen Demand | pH | Solids | Fluorides | Chemical Oxygen Demand | Chlorides | Nitrite, Nitrate Ammonia | Phosphates | Biological | Miscellaneous* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Jacksonville | 393 | 284 | 362 | 707 | 145 | 219 | 356 | 311 | 183 | 11,900 | 1908 |
| Winter Haven | 939 | 1292 | 1967 | 1035 | 1354 | 17 | 182 | 3209 | 1533 | 16,700 | 4478 |
| Orlando | .... | .... | .... | .... | .... | .... | .... | .... | .... | ..... | 21 |
| Pensacola | 1011 | 460 | 618 | 560 | 29 | 311 | 419 | 229 | 63 | 13,500 | 1762 |
| Mobile Trailer | .... | .... | .... | 10 | .... | .... | .... | .... | .... | ..... | 23 |
| TOTALS | 2343 | 2036 | 2947 | 2312 | 1528 | 547 | 957 | 3749 | 1779 | 42,100 | 8405 |

*Miscellaneous includes, phenols, cyanides, surfacts and other specialized analyses

## DIVISION OF INDUSTRIAL WASTE

**VINCENT D. PATTON, M.S.S.E.**
**Director**

This division has as its primary responsibility the control of the quality of liquid waste from industrial plants, air pollution, the facilities for mechanical refuse disposal and regulation of the installation of drainage wells. It is also concerned with obtaining background radiological data.

These responsibilities are discharged through the avenues of plan review, air and water sampling and technical assistance to local governmental agencies.

Personnel participated in a short course for food technology covering the effects of industrial wastes and stream pollution.

A considerable amount of time was devoted by division personnel toward establishment of an environmental program in Manatee County within the county health department (CHD). The program, as established under the direction of a sanitary engineer, will be concerned with stream pollution, air pollution, water supply, waste disposal and all other phases of environmental health. This program was stimulated by the location of a large phosphate processing plant in Manatee County.

Similarly, a considerable amount of time has been spent working with various people in Sarasota County in an effort to develop and implement a local program of like nature.

It should also be pointed out that bureau and division personnel continue to work towards expansion of urban CHDs so that additional services in the field of environmental health may be provided.

A phosphate slime holding area of one company failed, resulting in release of pollutional material to the state's waters. This was referred to the appropriate grand jury which took no action, stating this event was found to be an "Act of God."

### WASTE TREATMENT FACILITIES APPROVED IN 1965

Sixty-eight waste treatment facilities were approved in 1965. Thirty-five of these facilities were designed to serve coin-operated laundries. Other projects approved included waste treatment facilities for phosphate processing plants, plating plants, abattoirs and meat processing establishments, car wash installations, railroad yards, citrus processing plants, a milk and ice cream processing plant, a printing establishment and various other types of waste treatment facilities. Waste water disposal systems were approved for new phosphate processing complexes in both Polk and Hillsborough Counties, as well as for a new phosphate mining operation in Hamilton County. A complete phosphate processing complex is under construction adjacent to the Hamilton County mining operation. Table 33 lists plan approvals by counties.

Engineering work was completed and plans approved by the Division of Waste Water for conversion of the City of Leesburg sewage treatment plant to complete treatment, with provisions for handling process waste water from the citrus processing plant of Minute Maid Company within the city limits of Leesburg. This will help to alleviate pollution of a nearby lake.

As a result of a survey of the Ribault River during April, 1965 conducted by regional personnel, four industries which were previously discharging incompletely treated or raw waste to the river submitted documents for waste treatment facilities, two of which were approved in 1965, and it is expected that the others would be approved shortly after the first of the year.

A background study of the sugar industry, begun in 1964, was completed and a report entitled "South Florida Sugar Industry" was published. It is intended that follow-ups will be made, since this has been one of Florida's most rapidly growing industries, and one which has a very considerable pollution potential if satisfactory treatment and disposal are not provided.

A sampling program was undertaken at a wood preserving plant in order to determine the feasibility of discharging treated waste water into the city's municipal sewerage system. It was found that certain modifications of the industrial waste treatment facilities would be necessary to provide an improved quality of the treated effluent so that it would be acceptable.

As a result of the introduction on the market of detergents claimed to be biologically degradable, a study is in progress to determine how efficient various small laundry waste treatment facilities may be in removing the foam-forming and other constituents. It is expected that this work will be continued so that criteria may be modified as required with respect to detergents.

Continuing contact is being maintained with several categories of industry within the limits of capabilities of the personnel.

### STATEWIDE AIR POLLUTION PROGRAM

A considerable amount of work in the field of air pollution was carried out during the year.

A revised chapter on air pollution, 170C-9, proposed to the Board and adopted, contained provisions for limitations concerning the emission of fluorides from phosphate processing plants outside the Polk-Hillsborough Air Pollution Control District; and on a statewide basis, a process weight table for the control of particulates, specific limitations for asphalt plants and provisions for plan review and approval prior to installation of control devices.

In conjunction with the U. S. Public Health Service (USPHS), a course entitled "Meteorological Aspects of Air Pollution" was put on at Florida Atlantic University in Boca Raton in December, 1965. This provided more intensive training in air pollution for 50 students drawn from all sections of the state and from industry, government, CHDs and others who are concerned with this problem.

In addition, stack sampling training was provided for certain selected personnel to further train those immediately concerned with such work.

The ambient sampling program for sulfur dioxide in the vicinity of the New Smyrna Beach power plant and the Cape Kennedy power plant of Florida Power and Light Company was continued. In addition, a very limited amount of background sampling for particulates in the vicinity of the new phosphate processing plant now under construction in Hamilton County was also carried out.

As a part of the overall pollution control program of Dade County, a program director was hired for air pollution control and local control activities were started. In addition, a program was activated for air pollution control in Palm Beach County under a grant under the auspices of the Clean Air Act.

A study was started in Nassau County by the USPHS in response to requests by the State Board of Health (SBH) for technical assistance. The study involves an attempt to determine possible causes of complaints relative to air pollution with respect to two pulp and paper mills and other possible sources of air pollution. Another phase also being carried out involves stream pollution investigations.

An air sampling program to obtain a thoroughgoing background on paper mills was conducted during the summer of 1964. A further study was made during the summer of 1965, using information from the previous year, and this has permitted a refinement of stack sampling and ambient air techniques as part of a long-range program to characterize emissions from pulp and paper mills.

The division has also been involved in possible proceedings before the Federal Power Commission (FPC). As a result of the SBH interest in securing an additional amount of natural gas, a request was made to the FPC for permission to intervene in the proceedings when heard and this permission was granted. Subsequently, preparations have been underway to prepare necessary testimony for presentation at the proceedings when set down, probably in early 1966. The interest of the SBH in this matter has been caused by the numerous complaints which have been received relative to the operation of power generating stations, particularly in the urban areas where only high sulfur content fuels are presently available. It is anticipated that this request, if granted, will more than double the supply of natural gas now being brought into the state, but will certainly not be sufficient to insure that all of the power generating stations utilize only natural gas as their primary source of fuel.

Forty projects involving air pollution control devices were approved during the year.

### FLORIDA AIR POLLUTION CONTROL COMMISSION

Activities of the Polk-Hillsborough Air Pollution Control District (the only one in the state) are carried out under the rules promulgated by the Florida Air Pollution Control Commission (FAPCC). During 1965, the FAPCC consisted of the following: J. O. Bond, M.D.; M. W. Chesson; Curtis A. Cox; Henry M. French; Paul B. Huff; Raymond E. Parks, M.D.; E. R. Hendrickson, Ph.D.; Bruce C. Thomas, Ledley H. Wear; G. F. Westbrook, Ph.D.

M. W. Chesson replaced General D. N. Hauseman; Curtis A. Cox replaced E. T. Casler, D.Sc.; Henry M. French replaced W. D. Miller; Paul B. Huff replaced F. L. McNeer; and Bruce C. Thomas replaced A. P. McIntosh. Dr. E. R. Hendrickson was chairman and W. D. Miller, vice chairman.

The FAPCC held six meetings and one hearing. The hearing involved changes and amendments to the Rules and Regulations of the Commission. Also, as a result of hearings in 1964, a permit system was initiated in connection with the phosphate companies. During 1965, permits were issued in accordance with the new rules. Follow-up action will be required during 1966. One phosphate rock drying plant was cited for violation of the rules and regulations of the commission. In accordance with commission Notice of Hearing, they appeared before the commission on May 31, 1965. The company was found guilty of violating the Commission and given until August 1, 1965, to install necessary air control devices. The plant complied.

A resolution was passed by the commission requesting that Polk and Hillsborough Counties take necessary action to effect zoning considered necessary to help control air pollution. As of this date, no reply has been received from either county.

At the eighth annual meeting, December 3, 1965, Dr. G. F. Westbrook was elected chairman and Dr. James O. Bond, vice chairman.

### POLK-HILLSBOROUGH AIR POLLUTION CONTROL DISTRICT ACTIVITIES

SBH personnel reviewed a proposed phosphate complex which was to be located near Plant City. Company personnel were advised that the site was considered entirely unsuitable. A second site chosen by the company was met with public disapproval, and subsequently the plant was located in Manatee County.

A sulfuric acid plant, which had a history of fumigations caused by acid mists, was cited by the SBH, and proceeded to take necessary corrective action. The corrective action was taken within the time limit set forth in the notice and this correction significantly reduced nuisances to one of the communities in the area.

It is the philosophy of the SBH that all sulfuric acid plants should be equipped with such mist eliminators.

A seminar was held at Lake Alfred on September 7, 1965, which reported the results of the three-year study on "The Effects of Fluorides on Citrus." In summary, it was indicated that the results of the investigation were not conclusive concerning levels of fluorides in citrus leaves versus damage.

#### Ambient Air Monitoring

Activities within the district continued in the areas of ambient air monitoring, vegetative sampling, inplant sampling, inplant inspections, meteorological studies, special surveys and sample analyses.

The 59 Pensacola Bahia monitoring grass plots and filter paper samplers were discontinued in March, 1965.

The pasture grass sample network was expanded during the year to the present maximum of 48 established sites. This included abandoning several old sites and establishing a greater number of new sites in order to define the affected area more properly.

The gladiola monitoring program for the Ruskin area has continued on a biweekly basis. Background samples taken at Bradenton, Fort Myers and Naples have been discontinued. A conference with representatives of the gladiola growers resulted in a more effective complaint reporting method.

The dustfall survey established in 1961 was terminated at the end of 1965. Special vegetational surveys were activated in areas which may become affected by two new plants. The purpose of such a survey is to evaluate the situation in an area prior to plant operation.

Accompanying the special vegetation survey in one area, specialized incremental air sampling equipment was established and operated. This instrument collected samples to be analyzed for background fluoride and sulfur dioxide concentrations prior to plant start-up.

In order to provide definitive information regarding air contaminant concentrations, additional specialized sampling equipment was purchased for the program. These units included one mobile modified Thomas Autometer and two 14-unit automatic incremental sampling boxes. The use of two mobile meteorological stations was also initiated. Eighteen ambient air stations were maintained with the results providing fluoride and sulfur dioxide concentrations.

### Industry Expansion and Inspection

Regulation changes becoming effective early in 1965 changed the primary function of inplant inspections. The emphasis is being changed from that of locating uncontrolled sources and poorly operated control devices to those inspections required in order to issue the various permits. Of the 24 plant inspections performed, eight were for Limit Permits to Operate approval. The plant review activity included 31 separate evaluations.

Those plans covered control devices and/or plants as follows: three complete fertilizer plants (includes six sulfuric acid plants and the major portion of one complex relocated to Manatee County, a dry ice plant, an asphalt saturating plant, an asphalt oxidizing plant, 13 scrubbing devices or systems, three diammonium phosphate plants, two phosphoric acid plants, two phosphate rock dryers, three sulfuric acid plants, a phosphate rock drying-grinding plant and a ROP-triple storage building.

Evidence of the increasing problems in air control was seen in the accelerated activity in industrial expansion. During the year, many plants or unit operations were under construction, completed construction or began operation. The following is a list of those activities: a ship loading and off-site storage facility; four new phosphate rock dryers began operation; two new complexes completed and began operation (includes four sulfuric acid plants); four diammonium phosphate plants; four phosphoric acid plants constructed; a phosphate rock defluorinator began operation; five new sulfuric acid plants completed and began operation; a new ammonia plant completed and began operation; and a new drying and grinding plant under construction. These expansions have caused in excess of 225 conferences between company representatives, their engineers and district personnel.

### Source Sampling

Following the training of new personnel in 1964, the sampling program was accelerated with the completion of 84 sources of evolution from 12 plants owned by eight companies. This included 233 actual samples describing operational conditions for the time sampled. The source sampling teams intermittently contribute to the ambient air sampling program, as well as the collection and analysis of weather data. These people also make inplant inspections.

### Special Activities

The special activities during the year included ambient air surveys and the analysis of fluoride emissions from unique sources within the industry. A cooperative industry SBH survey was conducted to determine if a sulfur dioxide-acid aerosol problem exists within the district. The instrumentation was purchased by industry, while bureau personnel conducted the survey. That report is being prepared.

In connection with one of the problems mentioned earlier, a hi-volume sampling survey to determine total suspended particulate material was conducted around one of the phosphate rock drying plants. The purpose of this sampling was to determine conditions before and after additional controls were installed.

In cooperation with the Palm Beach CHD, concentrations of sulfur dioxide and acid aerosol were determined in the Florida Power and Light Riviera Beach plant area. This survey was initiated at the request of the CHD following citizen complaints.

The Pinellas CHD was also assisted when stack emissions were evaluated on an asphalt plant.

The district personnel also assisted in a survey of a paper mill in North Florida.

Operation of the national air sampling network sampler was continued in cooperation with the USPHS.

The Manatee CHD was assisted in initiating its ambient and vegetation background survey to represent conditions prior to establishing a new fertilizer complex in the county.

Within the phosphate industry, a unique situation was recognized wherein large quantities of fluorides evolved from an indiscreet multi-point source. Initial sampling of such a source, a triple superphosphate fertilizer storage building, was performed, requiring several man-days of time and the extensive use of expensive equipment. The performance of this particular study is unique, apparently, among all control agencies.

In cooperation with the public and other agencies, field tours and training missions were conducted involving personnel from the USPHS, North Carolina State Health Department, new staff writers of the SBH, Division of Radiological Health, Texas Gulf Sulfur, Ontario Health Department, CHD trainees, city employees and officials, and industrial personnel.

The use of air observation of a visible contaminant fumigation was initiated.

**Number of Air Pollution Samples Analyzed by Type**

Florida, 1965

| | |
|---|---|
| Ambient sulfur dioxide | 6,310 |
| Ambient fluorides | 6,446 |
| Grass fluorides | 919 |
| Treated filter papers | 286 |
| Dustfall | 114 |
| Miscellaneous (water, bones, vegetation, etc.) | 1,660 |
| Autometer tests | 25,828 |

Between 1958 and January 1, 1966, a total of 51,970 tests was made, exclusive of the autometer tests.

## REFUSE DISPOSAL

Interest in disposal of domestic solid wastes continues to increase as the problem becomes more critical and need for solutions becomes increasingly urgent, especially in the urban areas of Florida.

A total of 93 incinerator projects was approved in 1965, with an estimated cost of $5,673,500. Table 34 gives a breakdown of approvals by counties.

As the year ended, a new incinerator for the City of St. Petersburg was almost completed. The new Orlando incinerator was tested, a new combustible refuse disposal area was provided, and an improved quality of operation was obtained. A 750-ton per day incinerator was approved for Tampa to replace an "antique" unit which has proven to be completely inadequate to meet the task with the growing population of the city. Preliminary plans for a small compost plant to serve St. Petersburg have been received as has a preliminary engineering design for the first of five incinerators to be constructed in Dade County.

A solid waste feasibility study has been authorized in Brevard County which, when completed, should provide guideposts for methods of proper solid waste disposal in this county.

The Clean Air Act passed during the previous session of Congress was amended so that it now has certain provisions pertaining to solid waste disposal. Considerations are being given to possible planning proposals under the provisions of this act.

## DRAINAGE WELLS

A total of 146 well permits was issued in 1965. These wells were primarily to serve air conditioning and swimming pool drainage.

One permit was issued on an experimental basis for a well of 1,000 feet casing depth to receive industrial waste water from a furfural plant in South Florida.

## RADIOLOGICAL HEALTH

Work continued during 1965, in cooperation with the Division of Radiological Health and the Bureau of Laboratories, in securing samples for radiological analysis. Approximately 45 samples per month were collected and analyzed for gross alpha and gross beta activity. In addition to the water samples taken from surface waters, common carrier watering points, wells, and sewage treatment effluents, the sampling of soil, cabbage palm leaves, edible vegetation and oysters, initiated in 1964, was continued.

Sampling efforts continued to be concentrated in an area within a 50-mile radius of Cape Kennedy. Forty-seven sampling stations are located in that area. It is expected that the program in this area will be coordinated with the Air Force — USPHS program.

## TABLE 33

## INDUSTRIAL WASTE PROJECTS APPROVED WITH POPULATION EQUIVALENCE AND COST BY COUNTY, FLORIDA, 1965

| COUNTY | Number of Approvals | Population Equivalent | Cost |
|---|---|---|---|
| Alachua | 3 | 181 | $ 17,500 |
| Bay | 2 | 281 | 9,500 |
| Brevard | 3 | 450 | 13,000 |
| Broward | 1 | NA | 2,000 |
| Clay | 1 | 46 | 31,000 |
| Collier | 1 | 129 | 7,000 |
| Dade | 14 | 6,183 | 141,900 |
| Duval | 8 | 9,520 | 106,500 |
| Glades | 1 | 106 | 5,000 |
| Hamilton | 1 | NA | 400,000 |
| Hernando | 1 | 178 | 6,500 |
| Highlands | 1 | 134 | 5,000 |
| Hillsborough | 4 | 135 | 229,500 |
| Jackson | 2 | 2,842 | 10,000 |
| Lake | 2 | 28,900 | 250,000 |
| Levy | 1 | 69 | 800 |
| Manatee | 2 | 118 | 8,000 |
| Marion | 1 | 106 | 6,000 |
| Monroe | 1 | 148 | 6,000 |
| Okaloosa | 1 | 124 | 5,000 |
| Okeechobee | 2 | 325 | 45,000 |
| Orange | 5 | 325 | 45,000 |
| Polk | 6 | 13,800 | 546,000 |
| Putnam | 2 | 300,000 | 65,000 |
| Sarasota | 1 | 14 | 3,000 |
| Volusia | 1 | 136 | 7,000 |
| Total | 68 | 364,133 | $1,934,200 |

NA—Not applicable

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## RADIOLOGICAL HEALTH

Work continued during 1965, in cooperation with the Division of Radiological Health and the Bureau of Laboratories, in securing samples for radiological analysis. Approximately 45 samples per month were collected and analyzed for gross alpha and gross beta activity. In addition to the water samples taken from surface waters, common carrier watering points, wells, and sewage treatment effluents, the sampling of soil, cabbage palm leaves, edible vegetation and oysters, initiated in 1964, was continued.

Sampling efforts continued to be concentrated in an area within a 50-mile radius of Cape Kennedy. Forty-seven sampling stations are located in that area. It is expected that the program in this area will be coordinated with the Air Force — USPHS program.

### TABLE 33

### INDUSTRIAL WASTE PROJECTS APPROVED WITH POPULATION EQUIVALENCE AND COST BY COUNTY, FLORIDA, 1965

| COUNTY | Number of Approvals | Population Equivalent | Cost |
|---|---|---|---|
| Alachua | 3 | 181 | $ 17,500 |
| Bay | 2 | 281 | 9,500 |
| Brevard | 3 | 450 | 13,000 |
| Broward | 1 | NA | 2,000 |
| Clay | 1 | 46 | 31,000 |
| Collier | 1 | 129 | 7,000 |
| Dade | 14 | 6,183 | 141,900 |
| Duval | 8 | 9,520 | 106,500 |
| Glades | 1 | 106 | 5,000 |
| Hamilton | 1 | NA | 400,000 |
| Hernando | 1 | 178 | 6,500 |
| Highlands | 1 | 134 | 5,000 |
| Hillsborough | 4 | 135 | 229,500 |
| Jackson | 2 | 2,842 | 10,000 |
| Lake | 2 | 28,900 | 250,000 |
| Levy | 1 | 69 | 800 |
| Manatee | 2 | 118 | 8,000 |
| Marion | 1 | 106 | 6,000 |
| Monroe | 1 | 148 | 6,000 |
| Okaloosa | 1 | 124 | 5,000 |
| Okeechobee | 2 | 325 | 45,000 |
| Orange | 5 | 325 | 45,000 |
| Polk | 6 | 13,800 | 546,000 |
| Putnam | 2 | 300,000 | 65,000 |
| Sarasota | 1 | 14 | 3,000 |
| Volusia | 1 | 136 | 7,000 |
| Total | 68 | 364,133 | $1,934,200 |

NA—Not applicable

## TABLE 34

### INCINERATOR PROJECTS APPROVED WITH POPULATION EQUIVALENCE AND COST BY COUNTY, FLORIDA, 1965

| COUNTY | Number of Approvals | Population Equivalent | Cost |
|---|---|---|---|
| Alachua | 3 | 900 | $ 12,300 |
| Brevard | 4 | 1,380 | 24,000 |
| Broward | 3* | | |
| Citrus | 1 | 330 | 3,900 |
| Clay | 2 | 450 | 8,700 |
| Collier | 1 | 300 | 3,200 |
| Columbia | 1 | 300 | 3,200 |
| Dade | 7 | 3,300 | 68,100 |
| Duval | 2 | 630 | 7,700 |
| Escambia | 3 | 650 | 8,400 |
| Hernando | 1 | 300 | 3,200 |
| Highlands | 1 | 200 | 3,000 |
| Hillsborough | 12 | 253,540 | 3,902,000 |
| Lake | 1 | 320 | 4,300 |
| Lee | 3 | 1,500 | 15,300 |
| Leon | 1 | 300 | 3,200 |
| Marion | 1 | 300 | 3,400 |
| Martin | 1 | 250 | 6,000 |
| Monroe | 1 | 330 | 4,300 |
| Okaloosa | 1 | 330 | 4,300 |
| Orange | 6 | 2,250 | 26,000 |
| Osceola | 1 | 300 | 3,400 |
| Palm Beach | 9 | 2,250 | 29,100 |
| Pasco | 2 | 520 | 11,600 |
| Pinellas | 7 | 85,320 | 1,447,100 |
| Polk | 3 | 730 | 8,000 |
| Putnam | 2 | 600 | 6,400 |
| St. Lucie | 1 | 300 | 3,200 |
| Sarasota | 4 | 1,150 | 14,600 |
| Suwannee | 3 | 860 | 15,400 |
| Taylor | 1 | 330 | 4,200 |
| Volusia | 4 | 710 | 16,000 |
| Total | 93 | 360,930 | $5,673,500 |

*These approvals for means of residue disposal for three previously approved municipal incinerators.

## DIVISION OF SPECIAL SERVICES

CHARLES E. COOK, C.E.
Director

This division's primary responsibilities include the administration and enforcement of the bedding inspection statute; the control and supervision of the state shellfish industry; the review of land developments involving federal mortgage insurance, with recommendations for adequate water supply and sewage disposal facilities; the review of individual water supply and sewage disposal installations for homes as constructed under federal mortgage insurance; and technical assistance to county health departments (CHD) for septic tank regulations and plumbing regulations of the State Sanitary Code.

The activities of the division staff continued to be in the area of these responsibilities with no new or spectacular problems encountered.

### BEDDING LAW ADMINISTRATION

The most important event occurring during the year in the bedding law activities was the enactment by the Legislature of a revised law which had the effect of eliminating the requirement for use of the bedding inspection stamp on items of bedding and parcels of filling materials when sold or offered for sale. This law was introduced by the state and national associations of bedding manufacturers and was endorsed by the State Health Officer. It provides increased registration fees in all categories to compensate for loss of stamp sales revenue. The effective date of the law was January 1, 1966.

Adequate administration, inspection and enforcement activities were applied by staff personnel in controlling throughout the state the manufacture, renovation and sale of items of bedding used, or intended to be used, for sleeping purposes and of all processed filling materials intended for use in bedding. This supervision was maintained by the supervisor of bedding inspectors and five regional or area inspectors. The bedding laboratory with the staff chemist contributed a necessary service in the analysis and identification of filling materials.

Principally, this law, Chapter 556 F.S., is practice control on the industry requiring the accurate and meaningful labeling of all items of bedding to reveal actual contents and to prevent fraudulent practices by the manufacturer and renovator in the use and misrepresentation of concealed filling materials as to type and quality. The law requires registration with the State Board of Health (SBH) of all segments of the industry and specifies payment of registration fees. Inspection stamps sold by the SBH were required to be affixed to each label until January 1, 1966.

Activities devoted to enforcement were routine. There were 5999 official inspections of establishments in which bedding was made, renovated or offered for sale. A total of 28,510 items was found in violation to a variable degree of the law or of the regulations of the Sanitary Code. Most of these violations were due to lack of compliance with the stamp requirement, for which correction was allowed. However, 1294 pieces of bedding were placed off sale due to a major violation and either corrected or returned to the manufacturer. The number of restrictions was a little greater than last year due to increased production and sales. These enforcement activities would indicate fairly adequate and efficient control.

There was an increase in number of registrations, stamp sales and total revenue received and accounted for. A total of 6939 applications for registration was received, processed and issued during the year. These included 1152 manufacturers for in-state and out-of-state plants, 541 renovators and 5246 retailers. The total registration fees were $60,460. Total number of stamps sold and mailed was 4,329,150, from which the revenue was $59,223. Total revenue, including registrations and stamps, was $119,683. The staff chemist in the bedding laboratory received 146 samples, or items for investigation, and on these conducted 757 analyses.

### SUBDIVISION PLANNING

The passage of the Federal Housing and Urban Development Act of 1965 made changes in the procedures of the federal home mortgage insuring agencies. Chief among these changes was the limitation on use of private water supply and sewage disposal facilities in subdivisions or housing developments involved in federal mortgage insurance.

Both the Veterans Administration (VA) and the Federal Housing Administration (FHA) now require SBH certification of the economic feasibility of community or municipal public health utility services and/or the suitability of individual water supply and sewage disposal facilities where proposed.

This policy has increased and probably will cause an increased activity by the division in reviewing subdivision analysis of land developments with recommendations for adequate sanitary facilities and the required certification for FHA and VA. The federal requirement will enhance the SBH's control of proposed water supply and sewage disposal facilities in new subdivisions, housing and community developments and discourage the use of septic tank systems and private wells in concentrated areas.

An effort was made to devise effective legislation for legal control over proposed method for water supply and sewage disposal in subdivisions during the legislative session. Assistance was obtained from the staff of the Attorney General; but due to the controversial aspects of an effective bill and the lack of available time with the legislature nothing was accomplished. There continues to be an urgent need for an adequate law through which the SBH can prevent the wide and indiscriminate use of septic tanks and private wells to assure a satisfactory environment during the progressive growth of the state.

This program provides essential and technical services to land developers and the CHDs. The staff reviews analyses data on land to be used for subdivisions, housing and lot sales, in liaison with the CHDs and makes recommendations for adequate community utilities, or on the suitability of individual sanitary facilities, toward protecting the environmental health aspects of the area population. The primary purpose of this program is to restrict and prevent any wide use of septic tanks and private wells in urban areas and/or in areas where having a future potential of concentrated population in ratio to limited land area.

There were 58 reports of subdivision analysis from various CHDs processed during the year. These subdivisions included 1824 individual homesites. Use of proposed septic tanks was limited to 505 lots in isolated or relatively small subdivisions with limited population density; sanitary sewerage was recommended for all others.

Reports of inspection received and reviewed on sanitary facilities provided individual homes constructed under federally insured mortgages totaled 516 cases. A total of 242 of these homes was dependent on a private well for a satisfactory water supply along with a septic tank system on the same site. Normally, these cases applied to homes located in rural areas or sparsely developed urban areas where central utilities are not available and not economically feasible to provide. This service to the VA and the FHA does not necessarily limit or discourage use of individual sanitary facilities but it does assure construction of the facilities in compliance with minimum health standards for septic tanks and with recognized basic standards for individual wells including satisfactory water quality both bacteriologically and chemically.

### SHELLFISH AND CRUSTACEA CONTROL

The division continued the concerted effort of the previous year to implement controls on oyster and clam production throughout the producing areas in the state. During the year, a sanitary engineer and a sanitarian were added to the division staff and assigned principally to functions of the shellfish sanitation control program.

The U. S. Public Health Service (USPHS) has reaffirmed the need for effective control of shellfish shipped in interstate commerce and endorses the principle that there should be only one sanitation standard for all shellfish produced whether distributed through intrastate, interstate or international commerce or for home use.

The chief concern of the shellfish control program is to prevent unsafe shellfish from being harvested and reaching the consumer. To insure this objective, shellfish must be harvested from approved growing waters that meet minimum standards of quality for a safe and wholesome product. The program has the responsibility for evaluating the sanitary quality of growing areas and approval of waters. Sanitary and bacteriological surveys, in detail, of the waters and adjacent watersheds constitute a principal activity of the staff, with assistance from personnel of the various CHDs. Further responsibility of the division is the certification of all shellfish plants and issuance of permits and the monitoring of sanitary practices of the industry in processing, packaging and identification of shellfish products.

Each year the USPHS makes an evaluation of the shellfish control program in each state producing shellfish and if standards of control meet the minimum requirements as recommended, national certification is granted. If this evaluation does not meet the minimum uniform standards, certification is withheld pending corrective action. This evaluation of the state shellfish sanitation program for the year reported a satisfactory rating on seven of the eight individual program elements with continued endorsement of the program. A below standard rating was received on the sanitary survey element with request made that additional shoreline and hydrographic data be obtained on several approved areas. To correct these deficiencies and enhance the safety of all approved waters, the services of the sanitary engineer was provided to obtain and update the sanitary survey data on all areas.

Activities during the year included surveys on proposed shellfish harvesting areas and reappraisal of twelve existing shellfish growing areas. Approved areas must be reappraised bi-annually to assess any new pollutional sources, or other significant changes on the watershed. New areas in St. Lucie, Manatee, Collier, Martin, Hillsborough and Pinellas Counties were surveyed, evaluated and approved.

Improved liaison with and more detailed service was provided to those CHDs in which the industry's activities are located. Shellfish processing plants were located in 22 counties. In all except Franklin, the sanitary inspections of processing establishments and enforcement of sanitary regulations are the routine functions of the CHD. Interest in the control and the efficiency of activities by these CHDs were most satisfactory.

Official maps delineating approved waters were revised and improved. These maps were supplied to the State Board of Conservation, CHDs and to others on request. All other file records were revised and updated.

Three shellfish sanitation training courses were held during the year. Planning of these courses was coordinated by the USPHS Gulf Coast Shellfish Sanitation Research Center, in collaboration with representatives of the USPHS regional office in Atlanta and the Shellfish Sanitation Training Activities of the Sanitary Engineering Center in Cincinnati. The purpose of each training course was to improve and implement the shellfish sanitation program and to offer the participants increased and updated knowledge in this area of the overall sanitation program. The instruction covered the following subjects: the goals of the cooperative program, shellfish biology, bacterial criteria of shellfish waters, shellfish-borne disease outbreaks, plant and equipment design and sanitation, relaying depletion and patrol activities, refrigeration of shellfish, container identification and the elements of a sanitary shoreline survey. These courses were held in St. Petersburg, Cocoa and Dauphin Island, Alabama, in order to afford each shellfish producing county an opportunity to send personnel to the course. Approximately 90 persons attended these courses from county, city and state health departments, as well as personnel from the State Board of Conservation (SBC). All instructions were provided by the USPHS.

The marine laboratory in Apalachicola and the micro-biologist were extremely active during the year. Revised bacteriological standards for marketed shellfish were adopted by the USPHS and used on extensive samples analyzed in the marine laboratory. Imported shellstock during the summer months were tested prior to processing with 145 gallons of shucked oysters and 64 sacks of shellstock condemned and further imports prohibited.

The Communicable Disease Control unit of the USPHS and the SBH epidemiologist, with assistance from four members of the staff, investigated a report of food poisoning attributed to the consumption of raw oysters, however, laboratory analysis from approximately 200 samples were negative when analyzed for pathogenic organisms.

In addition to continuing the shellfish toxin surveillance program in Southwest Florida, a monitoring program for pesticides, heavy metals and background data for radionuclides is now being carried out in three locations along the Atlantic and Gulf Coasts.

Several meetings were held with personnel from the SBC and during the year a patrol policy for unapproved waters was developed by the SBC, SBH and the USPHS. This patrol policy assures uniformity of patrol activities throughout the state and will enhance the control of unapproved operations. It also provides a method of identification of closed areas, listing areas to be patrolled, frequency and nature of patrols, type and frequency of reporting patrols and public education measures employed.

Franklin County continues to lead the state in the production of oysters with preliminary data indicating that 2,058,110 pounds were landed during the year. These figures were compiled by the Fish and Wildlife Marketing Service.

Shellfish harvester permits were issued to harvesters and health cards issued to shellfish production workers by CHDs. Approximately 1100 health cards and 500 harvester permits were issued in the Franklin, Gulf and Wakulla County areas. A total of 157 shellfish houses were permitted during the year, including processing and shellstock shippers. Sixty-five were located in the Apalachicola Bay area.

The production of crabmeat decreased slightly even though there was an increase in the number of plants. The decrease was due to insufficient labor to catch the crabs when the meat was in demand. Market price of crabmeat picked was deemed to be good through the year.

Table 35 summarizes items of the shellfish and crustacea control program activities performed by this division personnel. Activities performed by personnel of the CHDs in shellfish control are not included but are reported by the Bureau of Local Health Services elsewhere in this issue.

### TECHNICAL ASSISTANCE

There were many instances of correspondence and references to interpretation and clarification of the septic tank and plumbing regulations of the sanitary code. New, revised regulations for Chapter 170C-4, Standards for Individual Sewage Disposal Facilities, were adopted by the Board June 20, 1965.

Liaison service was provided the School Plant Planning Services of the State Department of Education toward obtaining approval of sewage disposal facilities, and in the survey of a study of sewage flow rates in Florida schools.

### TABLE 35

### SUMMARY OF ACTIVITIES RELATING TO SHELLFISH AND CRUSTACEA PLANTS, FLORIDA, 1965

| Type of Operation | Operating Certificates Issued | State Visitations Made | New Plants Constructed | Plants Remodeled |
|---|---|---|---|---|
| Shellfish shucking and packing | 83 | 823 | 4 | 8 |
| Shellfish shellstock only | 48 | 26 | 12 | ....... |
| Shellfish repacking | 7 | 34 | ....... | ....... |
| Shellfish reshipping | ....... | 6 | ....... | ....... |
| Scallop processing | 11 | 19 | ....... | ....... |
| Crabmeat processing | 39 | 57 | ....... | ....... |

#### Related Shellfish and Crustacea Activities

| | |
|---|---|
| Oyster growing water samples bacteriologically tested | 1745 |
| Oyster meat samples bacteriologically tested | 324 |
| Crabmeat samples bacteriologically tested | 266 |
| Plant water samples bacteriologically tested | 367 |
| Number of new water areas approved for shellfish harvesting | 6 |

## DIVISION OF WASTE WATER

**RALPH H. BAKER, JR., M.S.S.E.**
**Director**

The division's responsibilities and activities in 1965 centered around review of plans, consultation and evaluation of operation for domestic waste facilities.

### MUNICIPAL WASTES

A total of 822 projects were processed and approved as compared to 842 projects in 1964.

The construction dollar volume of all projects processed again noted a decrease of approximately $9,000,000 when compared to the previous year ($47,300,000). This decrease was greatest in lift stations and collection systems (from $35,900,000 to $26,300,000), while sewage treatment plant construction remained approximately the same (Table 36). This is reflected in Figure 1, in that the number of sewage treatment plants approved were approximately the same as that for 1964. This resulted in 215 approved new sewage treatment plants or plant expansions. Of this, 192 were new facilities and 23 were modifications and/or expansions of existing facilities.

A number of incorporated municipalities and sanitary districts provided new treatment facilities or major improvements to existing facilities during the year. Those under construction were at Dania, North Miami, Auburndale, Eau Gallie, Winter Haven, Bradenton, Ft. Walton Beach and Tallahassee. The following municipalities and/or sanitary districts completed construction of major improvements during the year: Ft. Lauderdale, South Palm Beach, Cape Canaveral, Long Key Sanitary District, Blountstown, Holly Hill, Lake Butler, Pahokee, Daytona Beach, Starke, St. Petersburg and Dunnellon. During the coming year, it is anticipated the following municipalities will start construction, as plans have been approved: Coral Gables, South Miami, Opa Locka, Holmes Beach, St. Petersburg (main plant), Deerfield Beach, Leesburg, Pensacola, Niceville, Marianna, Umatilla, Naples and Winter Park. It is interesting to note that as municipalities grow and/or sanitary districts are created, major facilities are eliminated; as example, the City of Coral Gables' sewage treatment plant will be taken out of service and connection made to the City of Miami, thus enabling the City of South Miami to connect to Coral Gables. The City of North Miami's plant has been modified and an ocean outfall constructed, thus providing ample capacity to serve North Dade County. Other notable improvements during the year have been the upgrading of sewage treatment at major installations, in that with the completion and/or contemplated construction at Dania, Starke, Leesburg, Pensacola, St. Petersburg and Marianna, some 53 million gallons of secondary treatment plant capacity will have been provided where primary treatment existed.

It will be noted from Figure 1 that during the past decade there has been a tremendous increase in sewage treatment plants within the state. At the present time, it is noted from Table 37 that there is a total of 1539 sewage treatment plants of various types and sizes in the state. Of the 364 incorporated municipalities reported in the 1960 census, 159 have municipal treatment systems, leaving the remaining 1380 treatment plants serving commercial installations, institutions and subdivisions. This figure may be further broken down to approximately 317 privately owned systems and the remaining 1063 serving commercial installations, motels and schools. Operation reports are required to be submitted by all of these facilities. There are 623 sewage treatment plants out of the 1539 routinely submitting operation reports, amounting to approximately 5500 operation reports which were received by the division for review, comment and acknowledgment during the past year.

A total of 151 visits and field investigations was conducted on a cooperative basis with the regional and county engineers. These visits covered some 23 counties.

Fifty-one engineering reports covering sewerage projects were submitted during the year. Eighteen of these reports were for sanitary facilities covering trailer parks, commercial installations, schools, etcetera. Thirty-three were for municipalities, eight of which were for municipalities without any previous sewerage facilities. The workload imposed by these preliminary reports is quite significant when the amount of time spent in researching the files, meeting and consulting with the individual consulting engineers, in addition to the actual review, is taken into consideration.

## ADDITIONAL ACTIVITIES

The division during the past year provided instruction at five regional short schools and the annual short school, as well as arranged the program for the annual short school; compiled and processed examinations for the voluntary certification program; participated in two urban planning and environmental health courses, one at Gainesville and the other in Brevard County; and planned the program for the Florida Pollution Control Association annual meeting. A field investigation covering the sewage treatment plant near Lake Clarke and vicinity was incorporated in the Lake Clarke Report.

## TABLE 36

### NUMBER OF SEWERAGE PROJECTS APPROVED WITH DESIGN POPULATION AND ESTIMATED COST BY COUNTY, FLORIDA, 1965

| COUNTY | No. of Projects | Design Population | ESTIMATED COSTS | | | |
|---|---|---|---|---|---|---|
| | | | Sewers | Lift Station | Plant | Total |
| Alachua | 17 | 5,897 | $ 1,187,581 | $ 110,500 | $ 70,500 | $ 1,368,581 |
| Bay | 2 | 576 | 30,510 | ........ | 13,000 | 43,510 |
| Bradford | 1 | 350 | 138,000 | 32,000 | ........ | 170,000 |
| Brevard | 99 | 31,516 | 2,502,431 | 497,676 | 740,200 | 3,740,307 |
| Broward | 64 | 54,819 | 1,830,881 | 359,700 | 604,700 | 2,795,281 |
| Calhoun | 1 | ..... | 500 | ........ | ........ | 500 |
| Charlotte | 5 | 165 | 16,000 | 2,800 | 20,700 | 39,500 |
| Citrus | 7 | 519 | 35,400 | 20,700 | 19,000 | 75,100 |
| Clay | 10 | 2,718 | 190,400 | 4,000 | 32,000 | 226,400 |
| Collier | 20 | 24,110 | 480,458 | 392,700 | 579,300 | 1,452,458 |
| Columbia | 9 | 1,943 | 105,965 | 3,900 | 57,000 | 166,865 |
| Dade | 87 | 184,213 | 4,459,454 | 1,183,250 | 411,000 | 6,053,704 |
| Duval | 80 | 28,104 | 634,550 | 117,835 | 557,187 | 1,309,572 |
| Escambia | 20 | 100,186 | 388,411 | 136,700 | 3,513,500 | 4,038,611 |
| Flagler | 1 | 308 | 10,800 | 3,500 | 12,200 | 26,500 |
| Franklin | 1 | 100 | 19,976 | ........ | ........ | 19,976 |
| Glades | 1 | 60 | 800 | 700 | 4,500 | 6,000 |
| Hamilton | 2 | 123 | 1,100 | ........ | 10,700 | 11,800 |
| Highlands | 2 | 3,112 | ........ | 25,500 | 113,500 | 139,000 |
| Hillsborough | 33 | 7,698 | 792,669 | 295,385 | 183,350 | 1,271,404 |
| Indian River | 5 | 515 | 39,066 | 8,000 | 5,242 | 52,308 |
| Jackson | 1 | ..... | ........ | ........ | ........ | ........ |
| Lake | 18 | 6,552 | 101,850 | 309,700 | 542,000 | 953,550 |
| Lee | 18 | 7,704 | 585,864 | 85,440 | 47,000 | 718,304 |
| Leon | 1 | 16,636 | 117,000 | 88,000 | 511,500 | 716,500 |
| Levy | 1 | 675 | ........ | 20,000 | ........ | 20,000 |
| Madison | 1 | 500 | 21,545 | 18,000 | ........ | 39,545 |
| Manatee | 28 | 4,068 | 170,469 | 21,700 | 104,950 | 297,119 |
| Marion | 8 | 2,242 | 200,500 | 2,000 | 65,300 | 267,800 |
| Martin | 3 | 1,493 | 133,000 | 13,000 | ........ | 146,000 |
| Monroe | 7 | 1,881 | 65,800 | 18,500 | 79,100 | 163,400 |
| Nassau | 2 | 43 | 1,850 | 350 | 4,750 | 6,950 |
| Okaloosa | 13 | 30,061 | 143,425 | 43,000 | 213,625 | 400,050 |
| Orange | 59 | 65,055 | 1,178,332 | 246,533 | 1,016,000 | 2,440,865 |
| Osceola | 2 | 6,057 | 143,000 | 140,000 | 249,000 | 532,000 |
| Palm Beach | 60 | 51,100 | 2,666,819 | 684,050 | 143,500 | 3,494,369 |
| Pasco | 7 | 2,690 | 62,000 | 27,800 | 51,000 | 140,800 |
| Pinellas | 51 | 90,311 | 1,223,865 | 89,100 | 1,567,350 | 2,880,315 |
| Polk | 13 | 17,972 | 114,050 | 136,500 | 172,420 | 422,970 |
| St. Lucie | 2 | 333 | 86,000 | ........ | 8,772 | 94,772 |
| Santa Rosa | 2 | 1,533 | 116,400 | 19,600 | ........ | 136,000 |
| Sarasota | 29 | 4,832 | 239,381 | 95,050 | 90,000 | 424,431 |
| Seminole | 4 | 169 | 33,182 | 15,400 | ........ | 48,582 |
| Sumter | 1 | 45 | 575 | ........ | 6,000 | 6,575 |
| Suwannee | 1 | 200 | 20,000 | 2,500 | 20,250 | 42,750 |
| Volusia | 23 | 4,999 | 536,901 | 203,514 | 150,600 | 891,015 |
| TOTALS | 822 | ..... | $20,826,760 | $ 5,474,583 | $11,990,696 | $38,292,039 |

## TABLE 37

## SEWAGE TREATMENT PLANT BY TYPES AND CAPACITY, FLORIDA, 1965

| Type of Sewage Treatment Plant | CAPACITY | | | | Total |
|---|---|---|---|---|---|
| | Less than 50,000 GPD | 50,000 to 500,000 GPD | 500,000 to 1,000,000 GPD | Over 1,000,000 GPD | |
| Activated sludge | 3 | 24 | 9 | 26 | 62 |
| Contact stabilization | 82 | 47 | 7 | 4 | 140 |
| Extended air | 785 | 46 | 0 | 1 | 832 |
| Trickling filter | 96 | 216 | 38 | 50 | 400 |
| Primary | 24 | 43 | 11 | 20 | 98 |
| Ocean outfalls | 0 | 0 | 0 | 7 | 7 |
| Totals | 990 | 376 | 65 | 108 | 1539 |

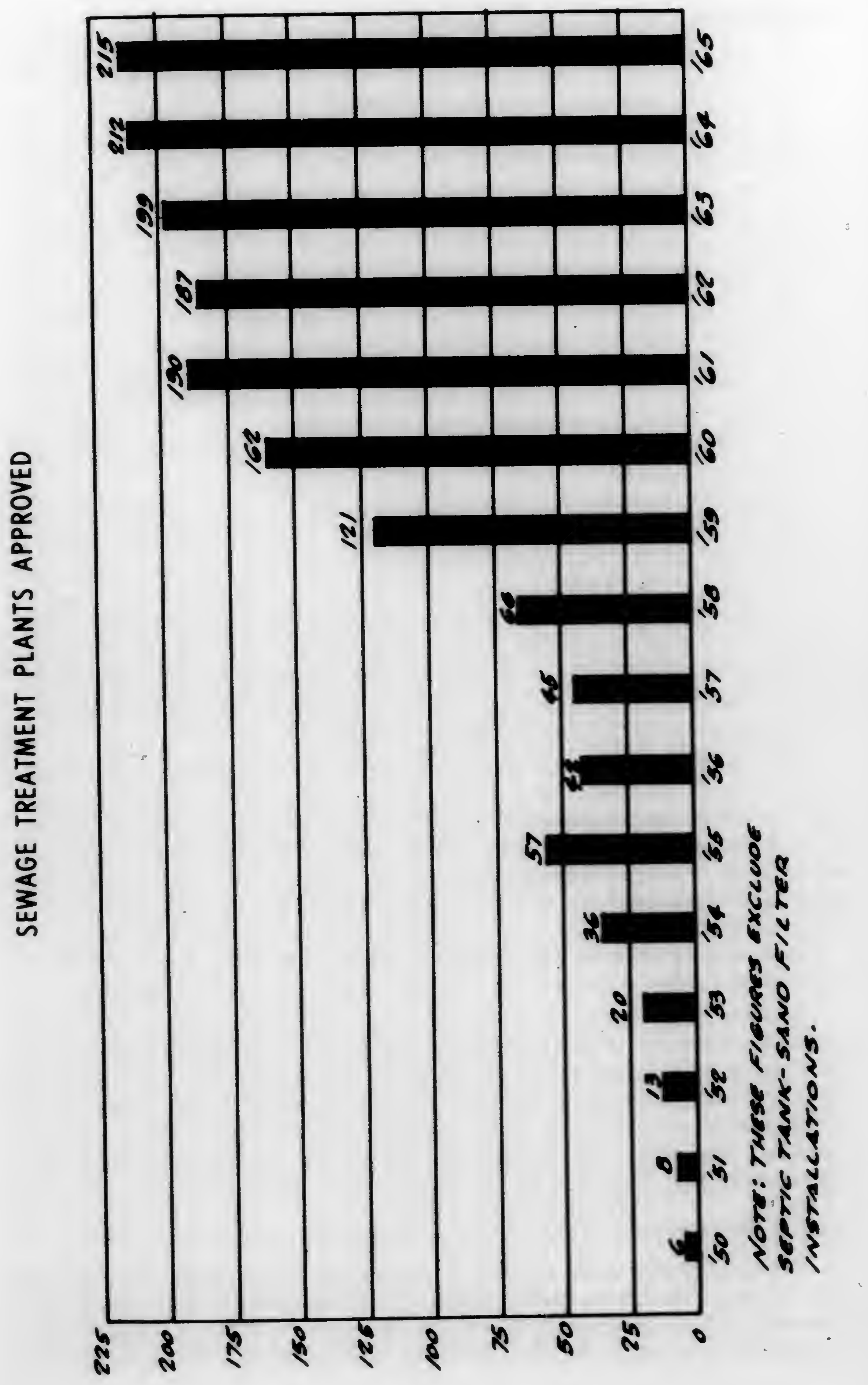
GPD—gallons per day

## TABLE 38

## NUMBER AND ESTIMATED COST OF WASTE WATER PROJECTS PROCESSED LOCALLY BY AREA, FLORIDA, 1965

| Area | Number | Estimated Cost |
|---|---|---|
| REGIONS | | |
| Northwest | 27 | $ 87,500 |
| Northeast | 86 | 225,000 |
| Central | 22 | 56,000 |
| Southwest | 3 | 11,000 |
| Southeast | 8 | 9,500 |
| COUNTIES | | |
| Brevard | N/R | N/R |
| Broward | 21 | 96,495 |
| Dade | 52 | 446,550 |
| Hillsborough | 0 | 0 |
| Palm Beach | 15 | 76,750 |
| Pinellas | 43 | 79,700 |
| Polk | 30 | 156,000 |

N/R—Not reported



NOTE: THESE FIGURES EXCLUDE SEPTIC TANK-SAND FILTER INSTALLATIONS.

## DIVISION OF WATER SUPPLY

JOHN B. MILLER, B.S., M.P.H.
Director

Principal activity of the staff of this division continued to be clearance of proposed projects for public water supply construction and new swimming pools which serve the public. Approval was issued of some 990 engineering plans and related documents for these two types of facilities. This combined total is about four per cent greater in number than those approved in the previous year.

Sampling was completed in the two-year survey of 90 selected public water supplies as to sodium content. This is part of a nationwide study in cooperation with United States Public Health Service (USPHS). Quarterly sampling was accomplished by regional and county personnel, and the sodium tests by Bureau of Laboratories with some 10 per cent of the water samples submitted directly to USPHS.

Pesticides pollution and carbon chloroform extractables (CCE) present in water supply continued under survey at Tampa. This is a study for developing background, and possibly control, information involving the Hillsborough River and tributaries as source of supply for Tampa. The project is undertaken in cooperation with the city's water department and the county health department (CHD); and laboratory analyses are performed by Southeast Water Pollution Laboratory, Athens, Georgia, of Federal Water Pollution Control Administration (FWPCA).

Late in the year, a survey was started in cooperation with Leesburg through its consulting engineers to investigate possible pesticides or CCE contamination of several of the city's supply wells. Here, too, arrangement was made with FWPCA for analytical work in its Athens laboratory. Other activity in this specialized field included limited sampling and analysis of Caloosahatchee River as proposed source of supply for Fort Myers; and the curtailed surveillance relative to any pesticides or CCE in city wells at Fort Pierce with sampling on approximately quarterly basis.

In May, the position of the department in the water resources field was further improved upon completion of preparation and publishing of a supplement to its 1960 tabulation of water quality data. The supplemental bulletin, updating data as of June 1964, comprises a compilation (over 1200 analyses) of data on some chemical and physical characteristics of raw water sources of the principal public supplies in the state.

### Construction of Public Water Works and Systems

Geared closely with Florida's continued fast growth in population, water utilities in many areas of the state show extension and planned expansion during the year to meet increased demand for service to the public. In its function of review and appropriate approval of the engineering plans and specifications for these water facilities, the division handled plans and papers for 921 projects. There were 101 plans brought forward from 1964 and 820 new ones received. Of these, 706 were approved including revisions, 47 filed for information, 58 returned to the responsible consulting engineers for various reasons and 110 project plans were carried forward to 1966.

Plant capability rating for serving present and future populations in the respective service areas of water utilities was reflected in the approved plans as some 85 million gallons per day (MGD) total, according to the consulting engineers' estimate (see Table 39). Most of this capability rating increment was in the 333 municipal projects approved, of which 44 were for plant expansions or modifications to provide about 33 MGD, mostly increased capability; and 19 new municipal or community systems when all completed will add or improve about 20 MGD rated capability, the projects being for Brooker, Cedar Key, Coral Springs, Gonzalez, Homosassa, Horseshoe Beach, Hudson, Lacoochee, Lake Beresford, Manatee County System, Noma, Okeechobee Beach, Pace, Panacea, Pine Island, Sanibel Island, Steinhatchee, Suwannee and Waldo.

There continued a relatively large volume of water supply and system work in the realty subdivision areas outside municipal corporate limits. Again, however, the number of these projects approved comprise less than half, 48 per cent of the total, with the remainder in cities and towns. The subdivision type projects total 320, including 79 new systems and 38 water plant expansion or modification projects.

Reference to Table 39 shows estimated costs of construction of the water utilities projects for which engineering plans were approved. The total dollar volume, according to the consulting engineers' estimates, was 21 per cent more than for the previous year. By far, the majority of the works were for distribution facilities and pipe lines, and a little over 13 per cent for supply and treatment.

### Water Supply Well Construction

Although fewer counties were "active" insofar as areas where public supply well construction permits were issued, there was a larger, seven per cent more, total number of permits issued over the state than in the previous year. Table 40 includes data showing number of permits issued for well construction in each county involved. Fifty-eight per cent of the number of well permits were issued involving only 20 per cent of total number of "active" counties in this respect.

### Operation of Public Water Works

In Table 41 is seen the statistical data on limited surveillance of water plant operation by central office personnel. Entries as to plant location by counties and the number of visits to them are noted in the tabulation. Comparatively, 38 per cent fewer visits were made to 43 per cent fewer plants located in less than 10 per cent fewer counties, than in previous year.

Considerable effort continued to be devoted to water works operator training by the division, and numerical data on the program are seen in Table 42.

### Fluoridation of Public Water Supplies

Although Pensacola discontinued its water fluoridation program after having it for more than a year, other cities were actively interested in this practice for control of dental caries. Sanford had approved it and was virtually ready to start at year's end. Daytona Beach voted in fluoridation and plans and specifications are expected in early 1966. Eau Gallie included facilities for fluoridation in the city's new water filtration plant under construction and expected to start operation in the spring of 1966. Also, City of Cocoa changed to hydrofluosilicic acid for expected better chemical feed to improve its water fluoridation. Cities and towns continuing their water fluoridation programs under technical supervision of the division were: Belle Glade, Clewiston, Cocoa (which serves Rockledge, Cocoa Beach, Canaveral and other island and coastal areas), Fort Pierce, Gainesville, Key West (and other Keys communities supplied fluoridated water from U. S. Navy plant at Florida City), Leesburg, Miami (which serves Coral Gables, Hialeah, Miami Beach, Surfside, Bal Harbour, Biscayne Key, Sweetwater and special water tax districts in Dade County), Ocala, Orlando and Ormond Beach.

### Public Swimming Pools

Engineering plans and specifications for 302 pool projects were received in the division, and 11 projects were brought forward from 1964; plus token review of county approvals. Of the total 313, there were 281 approved (including 40 revisions), four were filed for information, and 11 returned to the respective designated consulting engineers. Seventeen projects were carried forward to 1966.

Data on proposed public pool construction in the state are included in Table 40. Construction of pools at motels, apartment buildings and hotels, may be a measure of "tourism" economy factor, and this activity continued at a high rate, there being over three per cent greater number of projects with about eight per cent higher total estimated cost than in previous year. Similarly, according to consulting engineers' estimates, the average construction cost, $11,900, again indicated more of the relatively smaller to medium size pools for the kinds of places mentioned.

The public pools constructed in Florida have water recirculation, filtration and chlorination facilities; and after completion, pools are subject to certain requirements for operation permits.

Procedure was begun in the latter part of the year for increased utilization of consulting engineers' services in supervision of construction and, hence, certification as to completion in accord with approved plans, in getting pools ready for operation permit issuance. Whenever fully implemented, this is expected to help reduce time lag in placing pools under permit following completion of their construction. Table 40 carries statistics on pool operation permits issued; and about 65 per cent larger number of permits were issued than in the previous year, indicating some reduction in "backlog" of non-permitted pools, as well as increased number being built. Approaching 4000 permitted facilities in number, surveillance of operation of the public pools by CHDs requires ever increasing attention by them. The division assisted in pool operator short schools in the following counties with attendance as stated: Dade, 40; Escambia, 25; Hillsborough, 80; Leon, 8; Orange, 73; and Pinellas, 97 (St. Petersburg Beach, 64, and Clearwater, 33). There were 323 persons in attendance at the short schools which represents a 102 per cent increase over previous year.

### Natural Bathing Places

A permit issued for a place in Volusia County was the only bathing place permit added to the list of permitted natural bathing places during the year. In Table 40 is seen the number of such permits continued valid, listed according to county location. Inventorying all natural bodies of water throughout the state which are made available to the public for bathing and swimming, remained a need in order to effect more complete sanitary control of water-contact recreation.

### Interstate Common Carrier Water Supplies

Continuing stress was placed on sanitary control of water supplies providing potable and culinary water to interstate carriers. This program is conducted under a cooperative agreement with the USPHS on the basis of Interstate Quarantine Regulations and Drinking Water Standards. It involves establishing and maintaining an adequate bacteriological sampling schedule, surveillance of chemical and physical quality of water, inspection of supply and treatment facilities and review of analysis results; all followed by appropriate action to correct deficiencies, remove hazards, and insure safety to the water supply.

Five supplies were surveyed during the year by central office personnel in company with those from the USPHS. Routine surveys, along with follow-up visits on supplies with deficiencies, were accomplished at the local level. Work continued by personnel of the Bureau of Laboratories as requested in review of laboratory facilities and personnel of water plants equipped for bacteriological work. All activities were coordinated by and reported to the central office, where recommendations were made to the USPHS in Atlanta.

At year's end, 34 supplies were active in providing service to interstate carriers. Of these, 22 were in approved status, eight were provisionally approved, and four were recent additions with no current report. Three supplies were deleted from classification during the year. Details are indicated in Table 43 as to numerical data and actions taken.

## TABLE 39

## NUMBER OF WATER PROJECTS APPROVED, CAPACITY INCREASE, AND ESTIMATED COSTS, BY COUNTY, FLORIDA, 1965

| COUNTY | No. Projects Approved | Capacity Increase MGD* | ESTIMATED COSTS Water Supply | ESTIMATED COSTS Distribution | ESTIMATED COSTS Total |
|---|---|---|---|---|---|
| Alachua | 12 | 2.458 | $ 160,300 | $ 445,200 | $ 605,500 |
| Bay | 1 | ...... | ......... | 3,206 | 3,206 |
| Bradford | 1 | ...... | ......... | 64,000 | 64,000 |
| Brevard | 88 | 0.864 | 34,300 | 2,052,113 | 2,086,413 |
| Broward | 56 | 7.557 | 840,550 | 2,309,494 | 3,150,044 |
| Calhoun | 1 | ...... | ......... | 1,000 | 1,000 |
| Charlotte | 8 | 1.138 | 34,300 | 116,700 | 151,000 |
| Citrus | 8 | 2.584 | 44,500 | 287,700 | 332,200 |
| Clay | 14 | 0.705 | 25,700 | 122,700 | 148,400 |
| Collier | 10 | ...... | 22,000 | 82,590 | 104,590 |
| Columbia | 3 | ...... | ......... | 91,500 | 91,500 |
| Dade | 71 | 7.017 | 2,542,641 | 3,179,526 | 5,722,167 |
| DeSoto | 2 | ...... | 1,200 | ......... | 1,200 |
| Dixie | 2 | 0.180 | 36,260 | 101,620 | 137,880 |
| Duval | 34 | 2.315 | 109,630 | 394,592 | 504,222 |
| Escambia | 8 | 3.554 | 104,500 | 473,840 | 578,340 |
| Flagler | 1 | ...... | ......... | 300 | 300 |
| Franklin | 1 | ...... | ......... | 11,761 | 11,761 |
| Gulf | 1 | ...... | 75,000 | ......... | 75,000 |
| Hardee | 1 | 1.600 | 4,000 | 8,000 | 12,000 |
| Hernando | 3 | 0.346 | 26,000 | 91,600 | 117,600 |
| Hillsborough | 24 | 5.624 | 171,950 | 629,679 | 801,629 |
| Holmes | 1 | ...... | ......... | 53,000 | 53,000 |
| Indian River | 3 | 0.029 | 833 | 12,000 | 12,833 |
| Lake | 5 | 0.504 | 7,000 | 44,500 | 51,500 |
| Lee | 22 | 1.838 | 806,000 | 1,871,673 | 2,677,673 |
| Leon | 1 | ...... | ......... | 3,000 | 3,000 |
| Levy | 2 | 0.918 | 95,800 | 118,000 | 213,800 |
| Manatee | 19 | 12.218 | 1,571,800 | 9,244,900 | 10,816,700 |
| Marion | 11 | 1.780 | 43,071 | 103,746 | 146,817 |
| Martin | 6 | 0.216 | 5,000 | 49,700 | 54,700 |
| Monroe | 3 | ...... | ......... | 280,000 | 280,000 |
| Okaloosa | 7 | 0.858 | 219,000 | 241,600 | 460,600 |
| Okeechobee | 1 | ...... | ......... | 365,000 | 365,000 |
| Orange | 20 | 12.240 | 193,600 | 987,208 | 1,180,808 |
| Osceola | 1 | 0.720 | 4,481 | ......... | 4,481 |
| Palm Beach | 57 | 0.675 | 189,800 | 1,522,639 | 1,712,439 |
| Pasco | 16 | 1.964 | 48,700 | 138,100 | 186,800 |
| Pinellas | 32 | 2.400 | 105,450 | 1,652,219 | 1,757,669 |
| Polk | 10 | 4.422 | 364,615 | 213,085 | 577,700 |
| Putnam | 1 | 0.864 | 4,800 | 12,000 | 16,800 |
| St. Johns | 1 | ...... | ......... | 155,000 | 155,000 |
| St. Lucie | 6 | 0.144 | 7,100 | 9,270 | 16,370 |
| Santa Rosa | 4 | 0.720 | 56,000 | 385,700 | 441,700 |
| Sarasota | 18 | 0.518 | 32,780 | 3,010,100 | 3,042,880 |
| Seminole | 17 | 2.664 | 66,750 | 116,100 | 182,850 |
| Sumter | 3 | 0.720 | 3,500 | 15,400 | 18,900 |
| Suwannee | 1 | ...... | ......... | 16,870 | 16,870 |
| Taylor | 1 | 0.500 | 40,000 | 80,000 | 120,000 |
| Volusia | 21 | 1.998 | 89,750 | 502,158 | 591,908 |
| Wakulla | 1 | ...... | 40,000 | 135,000 | 175,000 |
| TOTAL | 656 | 84.672 | $ 8,228,661 | $31,805,089 | $40,033,750 |

*Million Gallons Per Day

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## TABLE 40

## PERMITS ISSUED FOR SWIMMING POOLS, NATURAL BATHING PLACES, WATER WELLS AND PLANS APPROVED FOR PROPOSED PUBLIC SWIMMING POOLS, BY COUNTY, FLORIDA, 1965

| COUNTY | PERMITS ISSUED Swimming Pools* | PERMITS ISSUED Natural Bathing Places* | PERMITS ISSUED Water Supply Wells | PERMITS ISSUED Swimming Pools | Plans approved for Proposed Public Swimming Pools Number | Plans approved for Proposed Public Swimming Pools Estimated Cost |
|---|---|---|---|---|---|---|
| STATE | 3740* | 58 | 415 | 542 | 503 | $5,997,704 |
| Alachua | 26 | 2 | 10 | 7 | 10 | 151,175 |
| Baker | 1 | ...... | 0 | 0 | 0 | ........ |
| Bay | 65 | 1 | 0 | 10 | 15 | 250,015 |
| Bradford | 7 | ...... | 0 | 1 | 1 | 12,000 |
| Brevard | 32 | ...... | 31 | 10 | 15 | 210,000 |
| Broward | 907 | 2 | 10 | 116 | 134** | 1,629,553 |
| Calhoun | 0 | ...... | 0 | 0 | 0 | ........ |
| Charlotte | 4 | ...... | 11 | 0 | 1 | *** |
| Citrus | 7 | ...... | 6 | 0 | 0 | ........ |
| Clay | 7 | 8 | 2 | 1 | 1 | 10,500 |
| Collier | 25 | ...... | 18 | 3 | 8 | 92,500 |
| Columbia | 8 | ...... | 7 | 1 | 2 | 20,000 |
| Dade | 999 | 2 | 2 | 149 | 114** | 941,333 |
| DeSoto | 1 | ...... | 0 | 0 | 1 | 27,000 |
| Dixie | 0 | ...... | 0 | 0 | 0 | ........ |
| Duval | 120 | ...... | 11 | 22 | 29 | 404,275 |
| Escambia | 41 | 1 | 5 | 12 | 10 | 120,500 |
| Flagler | 3 | ...... | 0 | 0 | 0 | ........ |
| Franklin | 0 | 1 | 1 | 0 | 0 | ........ |
| Gadsden | 4 | ...... | 1 | 0 | 0 | ........ |
| Gilchrist | 0 | ...... | 0 | 0 | 0 | ........ |
| Glades | 0 | ...... | 0 | 0 | 0 | ........ |
| Gulf | 0 | ...... | 0 | 0 | 0 | ........ |
| Hamilton | 0 | 1 | 1 | 0 | 0 | ........ |
| Hardee | 0 | ...... | 0 | 0 | 0 | ........ |
| Hendry | 2 | ...... | 0 | 0 | 0 | ........ |
| Hernando | 2 | ...... | 9 | 0 | 0 | ........ |
| Highlands | 3 | 1 | 1 | 0 | 0 | ........ |
| Hillsborough | 86 | 8 | 35 | 17 | 7** | 167,700 |
| Holmes | 0 | ...... | 0 | 0 | 0 | ........ |
| Indian River | 12 | 1 | 1 | 2 | 1 | 5,000 |
| Jackson | 5 | ...... | 0 | 1 | 1 | 16,000 |
| Jefferson | 2 | ...... | 0 | 1 | 0 | ........ |
| Lafayette | 0 | ...... | 0 | 0 | 0 | ........ |
| Lake | 23 | 1 | 10 | 0 | 3 | 54,000 |
| Lee | 37 | ...... | 22 | 0 | 9 | 92,700 |
| Leon | 31 | 3 | 7 | 5 | 4 | 43,500 |
| Levy | 5 | ...... | 3 | 0 | 0 | ........ |
| Liberty | 0 | 2 | 0 | 0 | 0 | ........ |
| Madison | 2 | ...... | 0 | 0 | 0 | ........ |
| Manatee | 16 | 2 | 1 | 2 | 1 | 23,726 |
| Marion | 50 | 3 | 49 | 7 | 6 | 88,850 |
| Martin | 10 | ...... | 1 | 2 | 2 | 19,500 |
| Monroe | 47 | ...... | 0 | 0 | 3 | 19,000 |
| Nassau | 17 | ...... | 0 | 0 | 1 | 10,000 |
| Okaloosa | 22 | ...... | 5 | 1 | 2 | 22,340 |
| Okeechobee | 4 | ...... | 0 | 2 | 0 | ........ |
| Orange | 66 | 1 | 12 | 7 | 12 | 226,000 |
| Osceola | 3 | ...... | 1 | 0 | 0 | ........ |
| Palm Beach | 319 | 1 | 6 | 71 | 51**** | 470,637 |
| Pasco | 7 | ...... | 15 | 1 | 1 | 22,000 |
| Pinellas | 295 | 5 | 5 | 41 | 18 | 367,400 |
| Polk | 63 | 3 | 18 | 3 | 1** | 7,700 |
| Putnam | 10 | ...... | 5 | 0 | 0 | ........ |
| St. Johns | 39 | ...... | 0 | 2 | 2 | 8,500 |
| St. Lucie | 20 | ...... | 2 | 2 | 0 | ........ |
| Santa Rosa | 2 | ...... | 0 | 0 | 1 | 8,500 |
| Sarasota | 99 | 2 | 40 | 17 | 10 | 136,800 |
| Seminole | 10 | 4 | 9 | 1 | 0 | ........ |
| Sumter | 3 | ...... | 10 | 0 | 1 | *** |
| Suwannee | 3 | ...... | 0 | 0 | 0 | ........ |
| Taylor | 14 | ...... | 2 | 2 | 0 | ........ |
| Union | 0 | ...... | 0 | 0 | 0 | ........ |
| Volusia | 148 | 1 | 28 | 23 | 23 | 305,000 |
| Wakulla | 1 | 1 | 2 | 0 | 0 | ........ |
| Walton | 3 | ...... | 0 | 0 | 1 | 14,000 |
| Washington | 2 | 1 | 0 | 0 | 0 | ........ |

*Accumulative totals—Adjusted on basis of all-county Swimming Pool Inventory.

**County approvals

***Cost omitted on one or more pool approvals

****Partial county approved pools (county approved since November 1, 1965).

## TABLE 41

## NUMBER OF WATER PLANTS VISITED, NUMBER OF VISITS, AND EXISTING PLANTS, BY COUNTY, 1965

| COUNTY | Number of Plants Visited* | Number of Visits | Number of Existing Plants |
|---|---|---|---|
| STATE | 101 | 160 | 1020 |
| Alachua | 2 | 2 | 21 |
| Baker | ....... | ....... | 2 |
| Bay | 3 | 5 | 14 |
| Bradford | 1 | 1 | 3 |
| Brevard | 4 | 10 | 10 |
| Broward** | 2 | 2 | 37 |
| Calhoun | 1 | 2 | 3 |
| Charlotte | 4 | 11 | 5 |
| Citrus | ....... | ....... | 12 |
| Clay | ....... | ....... | 12 |
| Collier | 4 | 9 | 8 |
| Columbia | ....... | ....... | 4 |
| Dade | 2 | 3 | 51 |
| DeSoto | 1 | 2 | 3 |
| Dixie | 3 | 3 | 4 |
| Duval | 3 | 7 | 95 |
| Escambia | 21 | 22 | 25 |
| Flagler | 2 | 3 | 3 |
| Franklin | 3 | 3 | 6 |
| Gadsden | 1 | 2 | 6 |
| Gilchrist | ....... | ....... | 1 |
| Glades | 2 | 4 | 3 |
| Gulf | 3 | 9 | 4 |
| Hamilton | ....... | ....... | 3 |
| Hardee | ....... | ....... | 4 |
| Hendry | 1 | 2 | 2 |
| Hernando | ....... | ....... | 22 |
| Highlands | ....... | ....... | 9 |
| Hillsborough** | ....... | ....... | 23 |
| Holmes | ....... | ....... | 2 |
| Indian River | ....... | ....... | 8 |
| Jackson | 3 | 4 | 12 |
| Jefferson | ....... | ....... | 1 |
| Lafayette | 1 | 1 | 1 |
| Lake | 1 | 2 | 52 |
| Lee | 10 | 13 | 14 |
| Leon | ....... | ....... | 34 |
| Levy | ....... | ....... | 12 |
| Liberty | ....... | ....... | 2 |
| Madison | ....... | ....... | 5 |
| Manatee | 4 | 4 | 33 |
| Marion | 1 | 2 | 16 |
| Martin | ....... | ....... | 12 |
| Monroe | ....... | ....... | 1 |
| Nassau | ....... | ....... | 5 |
| Okaloosa | ....... | ....... | 19 |
| Okeechobee | 2 | 3 | 3 |
| Orange | 1 | 4 | 92 |
| Osceola | ....... | ....... | 5 |
| Palm Beach** | 2 | 2 | 60 |
| Pasco | 1 | 2 | 49 |
| Pinellas** | ....... | ....... | 13 |
| Polk** | ....... | ....... | 37 |
| Putnam | 1 | 4 | 6 |
| St. Johns | 2 | 2 | 5 |
| St. Lucie | 1 | 3 | 8 |
| Santa Rosa | ....... | ....... | 9 |
| Sarasota | 4 | 4 | 20 |
| Seminole | 1 | 2 | 31 |
| Sumter | ....... | ....... | 13 |
| Suwannee | 1 | 2 | 2 |
| Taylor | ....... | ....... | 2 |
| Union | ....... | ....... | 2 |
| Volusia | 1 | 3 | 23 |
| Wakulla | 1 | 1 | 7 |
| Walton | ....... | ....... | 5 |
| Washington | ....... | ....... | 4 |

*By Central Office personnel except where otherwise noted.
**County Health Departments having engineering personnel.

## TABLE 42

## WATER AND SEWAGE WORKS OPERATORS SHORT SCHOOLS* FLORIDA, 1965

| Short School | Applicants | | Voluntary Certification Examination | | | |
|---|---|---|---|---|---|---|
| | | | Number Taking Exam. | | Number Passing Exam. | |
| | Water | Sewage | Water | Sewage | Water | Sewage |
| Annual (Univ. of Fla.) | | | | | | |
| (1) Class "A" | 4 | 19 | 4 | 19 | 1 | 10 |
| (2) Class "B" | 17 | 20 | 17 | 20 | 12 | 14 |
| Reciprocity "B" | .... | ..... | .... | ..... | .... | ..... |
| Regional Class "C" | | | | | | |
| Region 1. | 0 | 12 | 0 | 10 | 0 | 4 |
| Region 2. | 2 | 3 | 2 | 3 | 0 | 1 |
| Region 3. | 11 | 24 | 8 | 17 | 6 | 13 |
| Region 4. | 9 | 15 | 7 | 15 | 4 | 11 |
| Region 5. | 2 | 2 | 2 | 2 | 2 | 0 |
| Region 6. | 7 | 7 | 7 | 7 | 4 | 4 |
| Region 7. | 3 | 9 | 3 | 9 | 3 | 7 |
| Region 8. | 6 | 3 | 6 | 3 | 5 | 2 |
| Proctored Class "C" | .... | ..... | .... | ..... | .... | ..... |
| Reciprocity Class "C" | .... | ..... | .... | ..... | .... | ..... |
| Total Class "C" | 40 | 75 | 35 | 66 | 24 | 42 |
| Total Class "A", "B", "C" | 61 | 114 | 56 | 105 | 37 | 66 |

(*)This is a program of inservice training and home study under the aegis of the State Board of Health carried out jointly with the Extension Division of the University of Florida; the Florida Water and Sewage Works Operators Association; Florida Section, American Water Works Association; and Florida Pollution Control Association.
To be examined for Class C, an operator must have four equivalents (in years of experience and education); for Class B, he must have eight equivalents; for Class A, he must have 12 equivalents.

## TABLE 43

## SANITATION OF WATER SUPPLIES SERVING INTERSTATE CARRIERS, FLORIDA, 1965

| COUNTY | Number of Supplies | Type Carrier Served | | | Ownership of Supply | | Status of Supplies At Years End |
|---|---|---|---|---|---|---|---|
| | | Air | Rail | Vessel | Municipal | Private | |
| Bay | 2 | ... | ... | X | 1 | 1 | Provisional |
| Brevard | 1 | ... | ... | X | 1 | ..... | Approved |
| Broward | 2 | X | ... | X | 2 | ..... | Approved |
| Collier | 1 | ... | X | ..... | 1 | ..... | Approved |
| Dade | 1 | X | X | X | 1 | ..... | Approved |
| DeSoto | 1 | ... | X | ..... | 1 | ..... | Provisional |
| Duval | 2 | X | X | X | 2 | ..... | Approved |
| Escambia | 1 | X | X | X | 1 | ..... | Approved |
| Gulf | 1 | ... | ... | X | 1 | ..... | Provisional |
| Hillsborough | 3 | X | X | X | 1 | 2 | 2–Approved, 1–NCR* |
| Lee | 1 | X | X | ..... | 1 | ..... | Provisional |
| Leon | 2 | X | X | ..... | 2 | ..... | Approved |
| Monroe | 1 | ... | ... | X | ....... | USN | Approved |
| Orange | 2 | X | X | ..... | 2 | ..... | Approved |
| Palm Beach | 3 | X | X | X | 3 | ..... | 2–Approved, 1–NCR* |
| Pasco | 1 | ... | X | ..... | ....... | 1 | Approved |
| Pinellas | 1 | ... | X | X | 1 | ..... | Approved |
| Polk | 1 | ... | X | ..... | 1 | ..... | Approved |
| St. Lucie | 1 | ... | ... | X | 1 | ..... | Approved |
| Sarasota | 2 | X | X | ..... | 2 | ..... | 1–Provisional, 1–NCR* |
| Seminole | 1 | ... | X | ..... | 1 | ..... | Provisional |
| Sumter | 1 | ... | X | ..... | 1 | ..... | Provisional |
| Volusia | 1 | X | ... | ..... | 1 | ..... | Approved |
| Walton | 1 | ... | ... | X | ....... | 1 | NCR* |
| TOTALS | 34 | ... | ... | ..... | 28 | 6 | ............... |

(*)NCR—No current report

## BUREAU OF SPECIAL HEALTH SERVICES

**SIMON D. HOFF, M.D., M.P.H.**
Director (to June 15)

**M. J. FORD, M.D., M.P.H.**
Acting Director

Florida continues to enjoy the reputation of being a good place for the retiree to make his home. The state population over the age of 55 is now estimated at 21 per cent. The disease of the heart, blood vessels, cancer and diabetes cause over 70 per cent of the deaths of Florida residents. Higher mortality rates from such conditions as heart disease, cancer and stroke are reflected for the counties with older median ages as compared with counties with younger citizens.

The Bureau of Special Health Services has two divisions: The Division of Chronic Diseases and The Division of Hospitals and Nursing Homes.

Three-fourths of all invalidism is due to chronic diseases. Chronic diseases, either physical or mental, are responsible for most hospital admissions. Therefore, planning for the care of the chronically ill has continued to be one of the major considerations of the Division of Chronic Diseases which has active programs in cancer, diabetes, heart disease, prevention of blindness and smoking and health. One of the new programs of the division has been that of the establishment of glaucoma screening centers in the state. Over 61,000 persons have been screened for glaucoma. A total of 1568 persons were referred to ophthalmologists for diagnosis. Some 900 patients were found to have active or borderline glaucoma and were placed under treatment. These individuals were all previously unknown and most cases were discovered before extensive damage had lead to blindness. Follow-up under these programs has been excellent and only three per cent have been lost to follow-up.

Construction increasing the number of hospitals, as well as additions to existing hospitals, resulted in a sizeable increase in the number of hospital beds.

A greater increased rate of growth was noted in the nursing home industry. Interest was developed in church-related facilities which resulted in the building of several large complexes in the peninsular part of the state. Proprietary nursing homes continued their rapid rate of growth.

Public Law 89-97 (Medicare) will have much effect on the functions of the Division of Hospitals and Nursing Homes in both the licensing programs as well as the indigent hospitalization programs. On November 4, 1965, Governor Haydon Burns designated the State Board of Health as the administering agency for Title XVIII of this Act. Plans are being made for budgeting and staffing to meet the additional responsibilities of this program.

The Bureau of Special Health Services was set up in 1956, through a reorganization of existing programs. On June 15, 1965, S. D. Doff, M.D., director of the bureau, resigned. Malcolm J. Ford, M.D., deputy state health officer for program and planning, was appointed acting director. After several months study, it was recommended that the Bureau of Special Health Services be abolished and that two new bureaus be established. The Board of Health took formal action to effect this on December 5, 1965.

## DIVISION OF CHRONIC DISEASES

**J. E. FULGHUM, M.D.**
Director

The Division of Chronic Diseases of the Bureau of Special Health Services has continued to examine the nature and extent of the problem of various chronic diseases which present themselves as public health problems. Education and training programs have played a large part in the activities of the division. Progress has been made in increasing the knowledge and awareness of the public about chronic diseases; active participation in coordinated efforts has been successful in bringing to the physician an awareness and appraisal of the newer methods of prevention, diagnosis, treatment and rehabilitation of patients with chronic diseases. Health profile screening has been emphasized where such programs met the needs of a county.

The active ongoing programs within the division are cancer, heart disease, diabetes, prevention of blindness and smoking and health. Detailed reports of these programs will follow under their respective sections.

### Consultation Visits

During the year the staff of the division provided field consultation visits as follows: cancer 52, heart 83, diabetes 75, prevention of blindness 52, smoking and health 4, other special projects 23, with a combined total of 210 trips or visits.

### Relationship with Other Organizations and Agencies

The division is represented on the Florida Cancer Council; the Florida Coordinating Council for Cardiovascular Diseases; the Finance, Professional Education and the Executive Committees of the American Cancer Society, Florida Division; the Florida Committee on Smoking and Health and the Florida Diabetes Association.

These activities contribute to a good working relationship with the major voluntary health agencies which are concerned with chronic diseases.

## CANCER CONTROL PROGRAM

Cancer continues to be a major health problem to Florida residents. It remains the second highest cause of death. An estimated 10,300 Floridians will succumb to this disease in 1965.

Death rates for the period 1954 to 1964 reveal that cancer mortality has increased 21 per cent versus 18 per cent gain in the leading cause of death, heart disease. A major contributing factor to this increase is attributed to the rise of incidence of cancer of the respiratory system. In the past decade the rate of cancer of the respiratory system has increased 74 per cent, as compared to 13 per cent for all other types of cancer.

There are some encouraging indicators which show the need for and the influence of Cancer Control Programs. Programs of prevention and early detection are providing growing evidence that cancer need not be considered to be a fatal disease. The Papanicolaou technique in cervical cytological screening is a fine example of early detection, and it may be noted that the mortality rate for cancer of the cervix uteri has declined 20 per cent during the past decade.

*Tumor Clinics* — The Florida Tumor Clinic System continues to be a major instrument of the Cancer Control Program. During 1965, three new tumor clinics were approved by the Florida Cancer Council at Hollywood Memorial Hospital, Hollywood; Mercy Hospital, Miami; and Leesburg General Hospital, Leesburg. At the end of 1965, there were 28 approved tumor clinics in Florida.

Tumor clinics are staffed by private physicians of the community who serve without compensation. Many ancillary personnel, such as tumor clinic secretaries and registry clerks are paid by the State Board of Health (SBH) under the Cancer Control Program, with assistance from the American Cancer Society, Florida Division, Inc. Volunteer workers also assist in the operation of the clinics without compensation.

The tumor clinics serve the local and surrounding communities with consultation service to all cancer patients, private or clinic, inpatient or outpatient, when referred by their physician. The Cancer Control Program pays fees for the indigent outpatient diagnostic laboratory services and diagnostic X-ray procedures when authorized by the tumor clinic director.

Hospitalization for needy cancer patients may be paid by one of the three ongoing hospital programs: The Hospitalization for the Indigent (HSI), the Public Assistance Recipient program (PAR), or Medical Assistance for the Aged (MAA). MAA patients are not required to be processed through the tumor clinics but may be if the physician so desires. The MAA program will be discontinued June 30, 1966, and it is hoped that at that time the new state programs for the aged under medicare will continue to utilize the tumor clinic system.

*Cancer Registries* —Each tumor clinic has as one of its requirements, an obligation to maintain a cancer registry. This registry is kept in accordance with both SBH and American College of Surgeons criteria. Registry materials are furnished to these clinics as well as to three independent hospital registries. The improvement and upgrading of cancer registries is a continuing program.

*Consultant Services* — Consultant services of an administrative and statistical nature were provided to tumor clinics during the year. Each tumor clinic was visited at least twice, with emphasis placed on the training of both new and older clerical and secretarial employees, the improvement of cancer registry procedures and the utilization of registry material in providing feed-back of cancer data to the medical staffs.

*Cervical Cytology Program* — A limited cervical cytology program for approximately 15 counties not having tumor clinics was implemented in April, 1965. This program is planned around the county health department (CHD) providing clinical services, with arrangements for the pathologist furnishing his service for a minimum fee. In several counties the service cost was paid by the American Cancer Society, Florida Division. The Cancer Control Program provides the plans, supervision and basic materials for the "Pap Smear" technique. The program is incorporated with the ongoing "Family Planning Clinic" in cooperation with the Bureau of Maternal and Child Health (MCH). Expansion and continuation of the Cervical Cytology Program is highly desirable, and will be accomplished to the maximum extent funds will allow.

*Statistical Tabulating Center* — The SBH, in cooperation with the Florida Cancer Council and the Florida Association of Tumor Clinic Directors, is sponsoring a project designed to furnish a reliable method of collecting, evaluating, interpreting and reporting cancer diagnosis and treatment information. To accomplish this, a Statistical Tabulating Center was established at the central office of the SBH in 1963, and is currently receiving data from 19 selected tumor clinics which are processed by IBM procedure. This project was approved as a special project and was funded by a grant from the U. S. Public Health Service (USPHS) Cancer Control Program until December 31, 1965. One gratifying effect of the Statistical Tabulating Center has been the greatly improved quality and maintenance of cancer case records. A primary and important function of the tabulating center is to insure the uniformity and accuracy of registry abstracts, to coordinate the records of participating registries, to provide better follow-up and to assist the tumor clinic consultant in the guidance of the operation of the local hospital cancer registry.

The Statistical Tabulating Center has stimulated professional interest. The project is proving an effective agent for professional education by bringing the problem of cancer at the community level to the attention of the practicing physician, thus helping him to become better aware of the areas in which diagnosis, treatment and care of cancer can be improved.

In view of the value of this tool and expressions from professional interest, the Florida Cancer Council, Florida Tumor Clinic Directors Association and the American Cancer Society, Florida Division, plan to make this project a continuing program. It will be continued as an ongoing part of the Cancer Control Program.

*Professional Education* — Professional education is conducted primarily through participation and co-sponsorship of bi-annual cancer seminars. Other education is encouraged through local medical and volunteer societies.

### Special Projects

*Workshop for Tumor Clinic Secretaries* — A one-day workshop for tumor clinic secretaries and registry clerks was held December 8, 1965. This workshop was jointly sponsored by the SBH and the American Cancer Society, Florida Division. The continuance of these workshops as a valuable instrument in the upgrading and improvement of the local cancer registry and tumor clinic operations is greatly desired.

*Tumor Clinic Exhibit* — The St. Vincent's Hospital Tumor Clinic, Jacksonville, presented a two-day exhibit for hospital staff and personnel during September, 1965. The Cancer Control Program, SBH, assisted the tumor clinic in the provision of an exhibit depicting how tumor clinics are formed, their location and how they function. Hand out literature concerning cancer was also supplied.

*Monograph* — A monograph is now in preparation which describes the Community Cancer Demonstration Project, Cervical Cancer Cytology Survey of Aid to Dependent Children recipients. This survey was conducted during 1960-1963, and screened 10,174 women representing 57 per cent of the available population in this category.

*Literature — Publications — Audio-Visuals* — The Cancer Control Program participates in the activity of providing related literature and publications to the public, both lay and professional organizations. Current audio-visual cancer educational materials were purchased for the Audio-Visual Library, and is available for loan upon request.

*Liaison with other Organizations and Agencies* — In combating the cancer problem, the Cancer Control Program works in liaison with the USPHS, the state and county medical societies, the Florida Division of the American Cancer Society, the Florida Cancer Council, the Florida Association of Tumor Clinic Directors and the CHDs.

### Programs Requiring Expansion

*Program for the Care of the Advanced Cancer Cases* — The care of advanced cancer cases remains a major problem within the communities of the state. Existing laws do not permit hospitalization to this type patient unless there exists a medical or surgical emergency requiring hospitalization. Outpatient treatment and home care services are sorely needed for this person. Recent medicare legislation will probably assist in some of these areas for persons 65 years of age and over, but the need will remain for those not in this classification.

*Cancer Detection Program Activities* — Prevention and early cancer detection remain desirable goals. Factors of time, physicians, facilities, patients' cooperation and costs are involved in a good physical evaluation and early cancer detection. "Do It Yourself" kits are receiving some attention, however, such methods can never replace a screening examination conducted by an experienced clinician. Continued study is desirable in this field.

### TABLE 44

### TOTAL PATIENT VISITS TO TUMOR CLINICS ASSOCIATED WITH CANCER CONTROL PROGRAM, FLORIDA, 1961, 1963, 1965

| | TOTAL PATIENT VISITS | | |
|---|---|---|---|
| | 1961 | 1963 | 1965 |
| Alachua General Hospital | 148 | 212 | 177 |
| Bay County Tumor Clinic | 526 | 768 | 740 |
| Brevard County Tumor Clinic | .... | .... | 64 |
| Broward General Hospital | 738 | 500 | 416 |
| Duval Medical Center | 4411 | 5550 | 7412 |
| Escambia General Hospital | 1698 | 2960 | 2500 |
| Halifax District Hospital | .... | 300 | 230 |
| Jackson Memorial Hospital | 3788 | 3908 | 3716 |
| Lee Memorial Hospital | 172 | 100 | 350 |
| Manatee County Tumor Clinic | 219 | 219 | 150 |
| Mt. Sinai Hospital | 1001 | 1270 | 1655 |
| Marion County Tumor Clinic | 120 | 100 | 200 |
| Okaloosa County Tumor Clinic | 100 | 154 | 128 |
| Orange Memorial Hospital | 2034 | 2974 | 2936 |
| Pinellas County Tumor Clinic | 1783 | 2642 | 2507 |
| Polk County Tumor Clinic | 1690 | 1833 | 2090 |
| Sarasota County Tumor Clinic | 217 | 336 | 316 |
| St. Francis Hospital | 902 | 774 | 686 |
| St. Lucie County Tumor Clinic | .... | 224 | 227 |
| St. Mary's Hospital | 1154 | 961 | 1081 |
| St. Vincent's Hospital | 1570 | 1735 | 2343 |
| Tallahassee Memorial Hospital | 1382 | 1375 | 1422 |
| Tampa General Hospital | 2950 | 3967 | 3616 |
| University of Florida | 4661 | 3662 | 3692 |
| Variety Children's Hospital | .... | 812 | 1001 |
| TOTAL | 29574 | 35505 | 39655 |

## DIABETES CONTROL PROGRAM

Florida's popularity as a retirement area has caused an increasingly steady rise in the state's median age, with a corresponding increase in the number of both known and unknown diabetics who are now residents of Florida. Based on preliminary data obtained during the period January 1, to September 30, 1965, it is estimated that 850 Florida residents died of diabetes during that time.

Most recent reports show that diabetes ranked as the *eighth* leading cause of death among Florida residents. Arteriosclerosis due to diabetes is an increasingly large etiological factor in deaths due to coronary occlusion.

The diabetic complications of neuropathy, nephropathy, gangrene and retinopathy present an extensive problem in the state. These conditions present many economic problems among the elderly retirees suffering from frank diabetes, as well as to interested governmental agencies.

Diabetic retinitis ranks as the third leading cause of blindness within the state. Only contaracts and glaucoma are greater causal factors for blindness at this time.

The Diabetes Control Program integrates and coordinates all phases and stages of attack on this disease. This program is organized into the three major areas: insulin distribution, casefinding and education.

*Insulin Distribution* — State funds are used to furnish insulin for the medically indigent patients of the state. Approximately 3100 medically indigent diabetic patients are now receiving all or part of their insulin from state sources through the CHDs. The average annual cost per patient under this program increased from $14.06 in 1964 to $15.05 in 1965, primarily due to an increase in the cost of insulin.

The insulin distribution program has a local diabetes registry which is used for follow-up, for relative casefinding programs, and a reliable source of data for program evaluation.

There is a need to furnish oral hypoglycemic drugs to those individuals who are medically indigent, but cannot qualify through the present State Department of Public Welfare drug programs.

### Casefinding and Services

Casefinding is primarily the responsibility of the CHD, with assistance from the community and the SBH in the areas of consultation, program planning and limited financial aid for conducting diabetes surveys. Casefinding activities were reported in counties throughout the state. Well over 38,000 persons were reportedly screened in the mass screening programs during 1965, with approximately 500 persons being referred to their family physicians for diagnosis.

Casefinding activities have been primarily in three areas: offices of private physicians, community diabetes screening programs and relative testing programs.

A special program, involving the screening of women receiving ovulatory suppressant drugs under the MCH program, was established in both Orange and Polk Counties. New participants receive a two-hour postprandial blood sugar determination prior to starting on these drugs to establish a "baseline" for each participant. Periodic two-hour postprandial re-tests are conducted and their results are compared to the baseline to ascertain if there has been any significant rise in blood sugar levels, indicating carbohydrate intolerances. Those women exhibiting abnormal levels of blood sugar are removed from the oral agents.

A special study is being conducted in Pinellas County to explore the causal factors and treatment of hypoglycemia and its relationship to alcoholism.

### Education

The Diabetes Control Program's health information phase consists of three major areas: professional information, lay education and patient education.

*Professional Information* — The Florida Diabetes Seminar was held on September 30 and October 1, 1965, in Jacksonville. The Florida Diabetes Association, the University of Miami Medical School, the Postgraduate Education Branch of the University of Florida College of Medicine and the SBH cooperated in the planning and presentation of this professional seminar. About 100 physicians from Florida attended this two-day meeting.

Several classes were held for nurses, stressing the importance of diabetes screening, methods of case finding, and patient education. These classes were held in order to inform the nurses of the latest techniques of screening and patient education and to review symptoms, treatment and complications.

*Lay Education* — Societies for diabetic laymen are a most important means of promoting lay and patient educational activities as well as casefinding. During the past year, the Diabetes Control Program staff assisted the Florida Diabetes Association and its local lay societies in disseminating pertinent information. At the present time there are 14 active chapters within the state. These are located in Bradenton, Daytona Beach, Fort Lauderdale, Gainesville, Jacksonville, Leesburg, Lakeland, Melbourne, Miami, Naples, Orlando, Sarasota, St. Petersburg and Tampa.

*Timely Topics*, a monthly bulletin for diabetics, is distributed to 6000 persons per month. These persons are diabetics, relatives of diabetics, or those who have an interest in diabetes control. *Timely Topics* represents an economical way to get current information to the diabetics. This bulletin is also published in Spanish. Both editions are available on request.

Screening programs for diabetics is another method of conducting extensive public education. Large coordinated community diabetes screening programs are being conducted in Florida during Diabetes Week, health fairs, and at other times. Postprandial blood sugar determinations, two hours after a test meal, is considered to be the method of choice. Relative testing programs are the most productive, and CHDs and communities are encouraged to conduct such screening programs at regular intervals. In one county, 61 relatives of diabetics were given free blood sugar tests and a total of 16 new diabetics were discovered. This rate of almost 26 per cent is extremely high. Relative testing of the adjoining counties will be conducted to see if any causal factors for this abnormally high rate can be ascertained.

*Patient Education* — A number of CHDs are carrying on programs involving patient education. This can be achieved best by a coordinated program co-sponsored by the CHD, the local medical society, and the local society for diabetic laymen. This approach has been most beneficial to the patients, their families and the physicians. The number of hospital admissions for diabetic complications are lower in those counties with this type of an approach to a patient education program.

## HEART DISEASE CONTROL PROGRAM

According to mortality data, cardiovascular disease is the most serious of Florida's health problems. It alone causes more death than all other diseases combined accounting for over 50 per cent of all deaths. Preliminary figures indicate that during 1965 approximately 28,000 resident deaths were caused by major cardiovascular-renal disease. Mortality alone, however, is not the only impact on the state since cardiovascular disease is also the major cause of illness and disability.

### Heart Clinics

The activities of the Heart Disease Control Program are directed primarily to the field of service. Much attention has been devoted to the 21 cardiac clinics located throughout the state. In most cases the clinics are staffed by private physicians who serve without compensation. The Heart Disease Control Program presently supplies 17 CHDs with 28 nursing and clerical positions designed to provide support to the cardiac clinics and selected home nursing programs of these counties. The Florida Crippled Children's Commission and the Florida Heart Association also contributed to the support of the clinics.

The services of the clinics vary greatly, but they are designed to provide the indigent cardiac patient with specialized services not otherwise available to him.

### Rheumatic Fever Program

In general, all patients who have a well documented history of rheumatic heart disease should be given continuous prophylaxis.

Upon request of the patient's physician, the Heart Disease Control Program through the CHDs continued to provide medically indigent patients with penicillin or sulfa drugs for prophylaxis against recurrent streptococcal infections. As of December 31, 1965, 1008 persons were receiving these drugs continuously. A central registry is maintained to insure adequate patient follow-up. Public health nurses visit patients who become delinquent and encourage them to continue their medications.

### Stroke Rehabilitation Program

The training of public health nurses has greatly aided the physical rehabilitation program. Since 1962, the Heart Disease Control program has financed the training of 44 public health nurses from CHDs at either Rusk Rehabilitation Center in New York or Kenny Rehabilitation Center in Minnesota. Well organized rehabilitation programs are conducted in several of the CHDs and in some of the counties the public health nurses are on call by physicians in the counties and are available to instruct the stroke patients and their families under his supervision. Local physical therapists are used on a consultant basis where possible.

The rehabilitation consultant nurse of the SBH and the program director of the Florida Heart Association have continued to conduct stroke rehabilitation workshops for public health nurses and hospital nurses at various locations in the state. To date 19 workshops, each 12 hours long, have been presented in the state with an average attendance of 25 nurses per workshop. The nurses are expected to teach the rehabilitation principles to others when they return to their institutions.

Much enthusiasm has been generated in stroke rehabilitation. It has been estimated that 80 per cent of those who survive a stroke can be rehabilitated to take care of their daily activities if proper rehabilitation procedures are begun early.

### Intensive Coronary Care Units

Coronary heart disease is the leading cause of death in Florida and there has been increasing interest in providing specialized intensive care for these patients in the larger hospitals. A survey of the 35 hospitals with 200 or more beds indicated that eight are now equipped to provide a special environment separate from intensive care for patients with coronary heart disease. These special areas are appropriately designed, equipped and staffed to deal with the problems peculiar to the acute coronary patient.

Representatives from one hospital have submitted a project for funding to the USPHS to provide for training of nurses specializing in intensive coronary care units.

### Hypertension

Early detection of hypertension was conducted in conjunction with other CHD ongoing programs such as school health examination, prenatal clinics and health profile screening programs. As indicated by the activities reports of the CHDs, public health nurses make follow-up visits on abnormal cases.

### Congenital Heart Disease

Early casefinding of congenital heart defects was conducted in conjunction with other ongoing CHD programs such as MCH well baby clinics and school health examinations. Abnormal cases are referred to private physicians or cardiac clinics for further study.

As indicated by the activities reports of the CHDs, the public health nurse makes follow-up visits. She helps the parents of a child with a congenital heart defect understand his condition by reinforcing the physician's explanations. She helps them understand the importance of completing immunizations, especially pertussis, at the usual time to protect the child from preventable infections. As a means of preventing bacterial endocarditis, she stresses the importance of antimicrobial agents before the patient is subjected to dental extractions, tonsillectomy, etcetera.

Through the prenatal clinics gamma globulin is made available to medically indigent expectant mothers who are exposed to German measles during the first trimester of pregnancy. When taken at the proper time, gamma globulin usually prevents German measles and their possible effects on the unborn fetus such as congenital malformations.

### Special Projects

*Study of Retinal Vascular Changes* — Many forms of systemic vascular disease result in changes in the retinal vessels that can be observed ophthalmoscopically. This is an important parameter in the clinical evaluation of patients with hypertension, atherosclerosis and diabetes but unfortunately some of the criteria for interpretation are not adequately documented. Accordingly, a program has been designed to observe the retinal manifestations of systemic vascular disease and record them by fundus photography. This project is being conducted at the University of Florida Teaching Hospital in Gainesville and Duval County Medical Center in Jacksonville. The study will be concluded in 1966.

*Health Profile Screening Clinic — Jefferson County* — In cooperation with the Jefferson CHD and with the assistance of interested community groups this clinic attempts to detect predisposing conditions to heart disease and identify other chronic diseases. This clinic is partially supported through Heart Disease Control funds and a part-time public health nurse is assigned to the project. The clinic has been in operation since 1963 and has screened over 3000 persons. Many abnormal and unsuspected conditions were found and the persons referred to their private physicians for further diagnostic study and treatment if indicated.

## PREVENTION OF BLINDNESS PROGRAM (GLAUCOMA)

During 1965 the Prevention of Blindness Program focused its primary attention on the early detection of glaucoma.

In Florida, it is estimated that more than 40,000 adults over 40 years of age may have glaucoma. This eye disease accounts for about 15 per cent of all blindness and is the second most common cause of blindness in Florida. Loss of vision caused by glaucoma can usually be prevented if the disease is detected early and adequately treated. Glaucoma occurs most often after the age of 40, and the disease increases in incidence with age.

The objectives of the program are to encourage and assist with the implementation of glaucoma screening programs which will lead to the detection of increased intraocular tension, and other causes of blindness; to plan for referral of such discovered cases to the ophthalmologists in the area for further study, diagnosis and definite treatment; to encourage professional education of interns, residents, general practitioners and internists of the state in appropriate screening methods and techniques of ophthalmological examinations so that these physicians can then incorporate such screening methods as a routine procedure in their private practices; to promote public information and lay education activities; and to do special studies and develop statistical data which can be used to further the program and provide helpful information to other interested persons.

The foremost objective of this program, detection of glaucoma suspects in screening centers throughout the state, has been very successful. Through the assistance of the Neurological and Sensory Disease Service Program, USPHS, five glaucoma screening centers have been established. These screening clinics are having excellent responses from the residents of these areas. During 1965, 21,685 persons were screened for glaucoma, and 744 (3.43 per cent) were referred to medical eye doctors for diagnostic evaluation.

Some of the eye clinics have expanded their programs to include activities other than glaucoma detection. These activities will be mentioned under the individual programs that follow.

*Polk County Eye Clinic* — The Polk County Eye Clinic has been in operation since April, 1962. During 1965, 8224 persons were screened for glaucoma, and 237 persons (2.88 per cent) were referred to their medical eye doctors for diagnostic evaluation. The clinic has screened a total of 38,418 persons since it was opened in April, 1962, and referred 940 (2.45 per cent) glaucoma suspects to their medical eye doctors.

In Polk County, the staff is conducting a study on relatives of those persons who have been diagnosed with glaucoma. As of December 31, 1965, 161 relatives of known glaucoma patients have been screened, and 19 of these (11.8 per cent) have been referred as suspects. The results of this study further indicate the need for blood relatives to be examined for glaucoma.

The Polk County Eye Clinic has served as a training center for workers from other counties that are interested in the prevention of blindness.

Another activity is the preschool eye screening program. A full-time orthoptic technician assists with the screening of preschool children for amblyopia exanopsia and other vision defects.

*Volusia County Eye Clinic* — The Volusia County Eye Clinic has been in operation since May, 1963. The clinic, located in Daytona Beach, is known as the Halifax District Hospital Eye Clinic. This clinic offers glaucoma screening and other complete eye services.

A total of 19,821 persons have been screened since the clinic opened in September, 1963, and 482 (2.43 per cent) have been referred to medical eye doctors. It is of interest to note that the referral rate for the nonwhite (5.72 per cent) is considerably higher than the white population (2.27 per cent). Further study will be carried out on the nonwhite group to determine if this high rate will remain constant.

*Broward County Glaucoma Detection Program* — A glaucoma screening program was initiated in Broward County, January, 1965. A nurse was assigned to the CHD and supervised by the director of the Broward CHD and a Fort Lauderdale ophthalmologist. This program has demonstrated excellent cooperation between the CHD, the ophthalmologists and the Broward County Medical Society.

The Broward County program has been very successful to date. A total of 7021 persons have been examined for glaucoma and 309 (4.40 per cent) of these have been referred to medical eye doctors for diagnosis. Screening clinics are being scheduled for all areas of the county to provide an opportunity for all citizens to benefit from this service.

*Duval County* — An eye clinic has been established at the Duval Medical Center in Jacksonville. This clinic provides total eye care for the indigent population. A nurse has been provided to assist in the clinic and to screen for glaucoma. About 500 patients are being followed in the glaucoma clinic. Approximately 10 new cases are found each month.

*Pinellas County* — The Pinellas County Glaucoma Screening Program was initiated in October, 1965. This program is supervised by the Pinellas CHD, with assistance from the St. Petersburg ophthalmologists and the county medical society. The response to this new program by the local citizens has been excellent. A total of 1933 persons have been screened for glaucoma since the program was initiated in October.

*Seminole County* — A part-time glaucoma screening program was established in Seminole County in 1965. The health director obtained approval from the county medical society and then support from the Lions Club and two ophthalmologists from Orange County. Screening clinics are conducted two afternoons each month in the CHD. The ophthalmologists have trained nurses from the CHD staff to assist with the screening program. This type of program seems ideal for less populous counties and can be an approach other similar size counties might use.

### Short Term Programs

Glaucoma screening programs of one to five days duration have been conducted as special projects in some areas of the state. This type of program is valuable where continuous screening centers are not feasible. One such program was conducted in Dade County and 2800 persons were screened. These short term projects have found many unknown cases of glaucoma and are instrumental in making the public more aware of the disease.

Since the beginning of this program in April, 1962, the follow-up to diagnoses data for all glaucoma detection programs is summarized as follows:

| | |
|---|---|
| Total screened, all ages | 67,193 |
| Number referred to ophthalmologists for diagnosis | 1802 |
| Cases diagnosed glaucoma | 819 |
| Cases diagnosed borderline | 112 |
| Cases closed — no glaucoma | 607 |
| Suspects being followed | 212 |
| Lost to follow-up | 52 |
| a. Cannot locate | 16 |
| b. Uncooperative | 27 |
| c. Illness | 9 |
| Number persons not able to read 20/40 | 12,391 |

## TABLE 45

## GLAUCOMA SCREENING PROGRAM, FLORIDA, 1965

| County and Age | Persons Examined | Persons Referred | Per cent Referred |
|---|---|---|---|
| TOTAL | 21,685 | 744 | 3.4 |
| COUNTY | | | |
| Broward | 7021 | 309 | 4.4 |
| Pinellas | 1933 | 71 | 3.7 |
| Polk | 8224 | 237 | 2.9 |
| Volusia | 4507 | 127 | 2.8 |
| AGE | | | |
| Under 35 | 2048 | 20 | 1.0 |
| 35–44 | 2640 | 34 | 1.3 |
| 45–54 | 3331 | 91 | 2.7 |
| 55–64 | 4881 | 193 | 4.0 |
| 65–74 | 6729 | 301 | 4.5 |
| 75–84 | 1890 | 92 | 4.9 |
| 85+ | 166 | 13 | 7.8 |

### SMOKING AND HEALTH

The division has actively supported the Florida Committee on Smoking and Health since its organization by the provision of space for its office, supplies and educational materials for use of the Committee.

The division director is the secretary to the Committee and has provided guidance in the implementation of the statewide program as planned by the Florida Committee. The division has furnished the clerical assistance to the secretary in the preparation of educational materials, reports, minutes of meetings and other necessary correspondence.

## DIVISION OF HOSPITALS AND NURSING HOMES

C. L. NAYFIELD, M.D., M.P.H.
Director

The activities in this division increased as predicted for 1965. While the numbers of hospitals and nursing homes showed little change, the number of beds in these institutions showed a sizable increase. In order to comply with federal regulations in the hospitalization programs it became necessary for the hospitals to comply with Title VI of the Civil Rights Act. This division was assigned the task of requesting each hospital to complete the necessary forms to indicate their status and intent to meet the necessary standards. Only a few hospitals presented any difficulties in this respect and very little effect was evidenced on the indigent hospitalization programs. The Medical Assistance for the Aged (MAA) program showed a marked increase in expenditures so that almost all the budgeted funds were being expended.

Coordination of State Board of Health (SBH) activities under Title XVIII of Public Law 89-97 (Medicare) was assigned to this division. This will involve certification of the providers of services which include hospitals, extended care facilities (nursing homes), home health agencies and independent laboratories. Other functions include consultation to offer assistance to institutions to qualify and participate as providers of services, and coordination to plan for the new program to coincide and correlate with existing programs to the best advantage and utilization of all available health resources.

### HEALTH SERVICES FOR THE INDIGENT

Hospitalization and visiting nurse care provided under all indigent health programs continued with only a slight increase over calendar year 1964; total expenditures remaining almost the same at $12,046,000. A total of 420,464 days of care was rendered for 46,118 admissions.

The MAA program again increased sharply in size and expenditures while the Public Assistance Recipient (PAR) program, due to restriction of benefits from 30 down to 12 days, decreased substantially. During this period the Hospital Service to the Indigent (HSI), state-county, program remained approximately at the 1964 level.

At the end of the year there were 175 hospitals participating in the HSI, PAR or MAA programs. This compares with 167 participating hospitals at the end of 1964; an increase of 4.8 per cent. Hospitals submitting cost statements establishing patient per diem rates increased from 134 to 149 during the same period. The average per diem rate for all hospitals with established rates was $31.67, a gain of 5.6 per cent over the $30.00 figure of 1964.

The HSI program was established by an act of the 1955 Legislature to provide hospitalization, visiting nurse care and outpatient clinic services for the acutely or chronically ill or injured, medically indigent persons. Funds have not been available since the inception of the program to provide such visiting nurse care and outpatient services, therefore, these sections of Chapter 401, Florida Statutes have not been implemented.

The Legislature appropriated state funds of $956,000 for each year of the 1965-67 biennium. This compares with $885,900 and $918,900 for the previous biennium.

During 1965 all counties except Gadsden, Glades, Gulf, Holmes, Wakulla and Washington participated in the state-county program.

Tables 46 and 47 provide program statistics and financial data for 1965. Utilization as reflected by total admissions and days of care remained at approximately the same level as last year. Expenditures for services rose 5.1 per cent to $4,218,738. The average cost per day and average cost per admission continued their upward trend with increases of 4.6 per cent and 7.2 per cent over the previous year. It is noted the average length of stay also increased from 8.91 to 9.14 days.

The SBH administers the PAR program under the terms of an agreement with the Florida State Department of Public Welfare (SDPW). As a part of the agreement the SDPW reserves to itself the determination of indigency, final approval of medical diagnoses and final authority for hospitalization payments to vendor hospitals.

In early January the SDPW notified this agency that due to a limitation of funds it would be necessary to reduce expenditures within the program. Accordingly, on February 1, 1965, the number of days of hospital entitlement for an individual was reduced from 30 to 12 days for any 12-month period.

Hospitalization services to recipients decreased sharply due to the reduction of days of entitlement. The actual number of admissions decreased only 2.2 per cent but days of hospitalization were off 20.7 per cent from 1964. Expenditures amounted to only $4,622,758, a net difference of $1,022,740. The average cost per day continued its upward trend, rising to 3.3 per cent. Due to the curtailment in additional days entitlement, the average length of stay dropped from 9.4 to 7.6. The average cost per admission decreased from $255 to $214 for the same reason.

The MAA program was authorized by the 1963 Legislature and funds were provided for implementation on July 1, 1963. Hospitalization and visiting nurse care were the only services made available. While getting off to a slow start, the program has continued to grow at a steady rate. Expenditures for 1965 amounted to $3,296,344.

Experience in the hospitalization part of the program continues to indicate a higher cost per admission for this group of patients due to the longer stay in the hospital. The MAA average cost per admission at $350.51, while slightly down from last year, is much higher than the PAR cost of admission of $213.91 and HSI of $274.62. The average days of stay are now 12.67 versus 13.06 a year ago. The growth of the program can be judged by the increase of 47.4 per cent in number of admissions and 43 per cent gain in days hospitalized.

Utilization of services under the visiting nurse portion of the program, while small, still made the most significant gain. Statistics for the year are: 1397 admissions to service versus 395 in 1964; total visits of 22,846 versus 5719 and total expenditures of $90,947 as compared to $22,677. A flat rate of four dollars was paid for each visit.

### Advisory Committee to the Hospital Service for the Indigent

The 1965 Legislature amended Chapter 401, Florida Statutes, expanding the advisory committee to eleven members. The new members appointed were the Honorable Robert M. Haverfield of Miami and Phil Ashler from Pensacola. Ben P. Wilson, Ocala, and Joseph F. McAloon, Miami, hospital administrators, were reappointed to the committee. Other members are: H. Phillip Hampton, M.D., Tampa, chairman; Nelson Zivitz, M.D., Miami; State Senator Beth Johnson, Orlando; State Representative Ray Mattox, Winter Haven; Lake Lytal, Palm Beach County Commissioner; Don S. Evans, Orange County Commissioner, and Frank Kelly, Miami, attorney-at-law.

The committee met in Tallahassee on May 12 and December 3, 1965. Both meetings were largely concerned with the Medicare Bill (Public Law 89-97, Social Security Amendments of 1965). In the first meeting the committee recommended that Chapter 401.02 (10), Florida Statutes be amended to delete the word "acutely." Secondly, it recommended that the state do everything necessary to implement all phases of the forthcoming Medicare legislation. In the December meeting it passed a motion to recommend use of insurance carriers under Title XVIII to implement any medical and hospital benefits provided under Title XVI. It also requested an opinion from the Attorney General, State of Florida, to interpret Item 935, page 687, Journal of the House of Representatives, 1965 Legislature as to whether funds under this item could be used for Title XVI recipients to implement programs required by federal law for those aged 65 and over.

### RESERVATION INDIAN MEDICAL CARE PROGRAM

The program was continued under contract with the U. S. Public Health Service with funds of $53,000 provided. An amendment was negotiated during the year to make an additional $20,000 available when it became apparent funds would not be sufficient to cover services required. Seminole and Miccosukee Indians living on reservations in Broward, Dade, Glades and Hendry Counties are included in this program. Medical care benefits under the contract are hospital inpatient and outpatient service, physicians service, ambulance service, prescription drugs from contract stores and prosthetic appliances.

### TABLE 46

### MAJOR EVALUATION INDICES BY TYPE OF HOSPITALIZATION PROGRAMS, FLORIDA, 1965

| Evaluation Order | Public Assistance Recipients | Hospital Service for the Indigent | Medical Assistance for the Aged |
|---|---|---|---|
| Number of admissions | 21,611 | 15,362 | 9,145 |
| Days hospitalized | 164,122 | 140,412 | 115,930 |
| Total payments—state and federal | $4,622,758.30 | .......... | $3,205,396.56 |
| Total payments—state and county | .......... | $4,218,737.99 | .......... |
| Average cost per day | 28.17 | 30.05 | 27.85 |
| Average cost per admission | 213.91 | 274.62 | 350.51 |

Source: Applications processed and approved for payment reports.

## TABLE 47

## APPLICATIONS PROCESSED AND APPROVED FOR PAYMENT BY HOSPITALIZATION PROGRAM, BY COUNTY, FLORIDA, 1965

| County | Public Assistance Recipients | | | Hospital Service for the Indigent | | |
|---|---|---|---|---|---|---|
| | No. of Admissions | Days Hospitalized | Total Payments State & Federal | No. of Admissions | Days Hospitalized | Total Payments State & Local |
| TOTAL | 21,611 | 164,122 | $4,622,758.30 | 15,362 | 140,412 | $4,218,737.99 |
| Alachua | 351 | 2,829 | 93,599.65 | 277 | 1,701 | 57,968.69 |
| Baker | 66 | 449 | 12,360.71 | 32 | 184 | 5,397.07 |
| Bay | 248 | 1,895 | 55,063.09 | 109 | 1,271 | 39,060.20 |
| Bradford | 155 | 1,166 | 32,278.21 | 26 | 175 | 5,800.42 |
| Brevard | 194 | 1,492 | 52,906.87 | 535 | 5,536 | 188,551.37 |
| Broward | 622 | 5,351 | 162,766.76 | 617 | 9,190 | 283,963.28 |
| Calhoun | 202 | 1,181 | 28,646.54 | 22 | 114 | 2,920.92 |
| Charlotte | 88 | 493 | 16,425.74 | 83 | 701 | 22,113.51 |
| Citrus | 76 | 498 | 13,920.93 | 4 | 26 | 917.52 |
| Clay | 85 | 593 | 16,398.36 | 44 | 296 | 8,175.65 |
| Collier | 55 | 416 | 14,712.69 | 34 | 372 | 13,704.10 |
| Columbia | 332 | 2,431 | 53,689.77 | 118 | 841 | 20,332.78 |
| Dade | 2,804 | 26,868 | 940,094.50 | 1,989 | 21,743 | 771,369.05 |
| DeSoto | 89 | 440 | 8,093.11 | 54 | 483 | 12,008.27 |
| Dixie | 54 | 347 | 12,208.28 | 9 | 56 | 2,048.48 |
| Duval | 1,213 | 9,732 | 268,540.02 | 1,823 | 12,378 | 341,150.02 |
| Escambia | 1,020 | 6,781 | 188,444.12 | 351 | 3,410 | 105,214.67 |
| Flagler | 34 | 309 | 7,731.30 | 14 | 111 | 2,909.08 |
| Franklin | 118 | 523 | 14,069.93 | 36 | 160 | 4,375.52 |
| Gadsden | 264 | 1,992 | 45,662.17 | ........ | ......... | .......... |
| Gilchrist | 35 | 282 | 9,243.88 | 17 | 55 | 1,867.95 |
| Glades | 13 | 98 | 2,415.65 | ........ | ......... | .......... |
| Gulf | 74 | 403 | 9,247.27 | ........ | ......... | .......... |
| Hamilton | 122 | 743 | 18,102.45 | 10 | 54 | 1,378.50 |
| Hardee | 64 | 460 | 10,407.19 | 33 | 447 | 9,201.23 |
| Hendry | 39 | 321 | 6,832.29 | 51 | 481 | 9,428.48 |
| Hernando | 134 | 884 | 23,627.00 | 47 | 447 | 12,786.95 |
| Highlands | 121 | 887 | 23,263.95 | 68 | 652 | 18,325.78 |
| Hillsborough | 1,640 | 12,937 | 275,693.27 | 2,198 | 18,740 | 490,391.98 |
| Holmes | 399 | 2,436 | 54,687.17 | ........ | ......... | .......... |
| Indian River | 143 | 990 | 29,075.15 | 68 | 562 | 16,720.12 |
| Jackson | 641 | 3,941 | 90,080.19 | 96 | 712 | 17,208.61 |
| Jefferson | 62 | 542 | 13,878.88 | 15 | 105 | 2,231.28 |
| Lafayette | 42 | 309 | 6,917.45 | 13 | 93 | 2,977.73 |
| Lake | 275 | 1,841 | 52,859.37 | 181 | 1,549 | 47,591.97 |
| Lee | 118 | 1,048 | 33,179.54 | 122 | 1,247 | 40,660.60 |
| Leon | 333 | 2,642 | 70,336.85 | 218 | 1,911 | 51,456.35 |
| Levy | 95 | 831 | 30,002.17 | 13 | 121 | 4,060.98 |
| Liberty | 83 | 495 | 12,713.75 | 11 | 51 | 1,284.91 |
| Madison | 208 | 1,500 | 38,496.39 | 39 | 271 | 7,168.86 |
| Manatee | 288 | 2,202 | 60,578.19 | 120 | 1,304 | 38,422.58 |
| Marion | 448 | 3,429 | 99,561.34 | 111 | 1,316 | 39,594.12 |
| Martin | 70 | 528 | 17,149.63 | 42 | 437 | 13,970.01 |
| Monroe | 154 | 1,144 | 37,514.24 | 113 | 1,102 | 37,371.66 |
| Nassau | 152 | 876 | 25,039.10 | 98 | 488 | 14,099.51 |
| Okaloosa | 440 | 2,616 | 70,918.01 | 198 | 1,295 | 36,813.75 |
| Okeechobee | 65 | 437 | 10,919.99 | 27 | 171 | 4,663.84 |
| Orange | 906 | 7,493 | 202,985.69 | 588 | 6,838 | 194,868.82 |
| Osceola | 209 | 1,449 | 29,356.48 | 110 | 917 | 22,153.04 |
| Palm Beach | 654 | 4,852 | 154,684.31 | 1,170 | 11,183 | 355,831.58 |
| Pasco | 144 | 1,111 | 26,722.84 | 121 | 840 | 20,986.15 |
| Pinellas | 1,013 | 8,241 | 235,088.97 | 923 | 8,686 | 257,204.99 |
| Polk | 387 | 2,892 | 73,624.43 | 810 | 4,174 | 108,874.13 |
| Putnam | 271 | 1,690 | 47,218.64 | 79 | 583 | 18,604.71 |
| St. Johns | 162 | 1,157 | 26,277.78 | 126 | 1,179 | 29,596.84 |
| St. Lucie | 179 | 1,426 | 42,308.02 | 150 | 2,107 | 61,357.14 |
| Santa Rosa | 497 | 3,077 | 83,479.70 | 97 | 956 | 28,134.47 |
| Sarasota | 193 | 1,510 | 46,022.02 | 472 | 4,957 | 148,859.58 |
| Seminole | 289 | 2,462 | 71,945.17 | 107 | 1,441 | 44,942.22 |
| Sumter | 91 | 643 | 18,782.22 | 61 | 330 | 8,306.96 |
| Suwannee | 293 | 1,830 | 37,413.26 | 3 | 15 | 382.80 |
| Taylor | 125 | 808 | 25,134.79 | 42 | 250 | 8,303.24 |
| Union | 110 | 846 | 15,709.83 | 35 | 232 | 4,664.63 |
| Volusia | 825 | 6,430 | 188,828.51 | 351 | 3,120 | 92,583.97 |
| Wakulla | 83 | 522 | 13,017.78 | ........ | ......... | .......... |
| Walton | 470 | 2,702 | 60,525.27 | 31 | 245 | 5,424.37 |
| Washington | 382 | 2,373 | 53,279.48 | ........ | ......... | .......... |

## TABLE 48

## MEDICAL ASSISTANCE TO THE AGED HOSPITALIZATION APPLICATIONS PROCESSED AND APPROVED FOR PAYMENT, BY COUNTY, FLORIDA, 1965

| County | No. of Admissions | Days Hospitalized | Total Payments State & Federal |
|---|---|---|---|
| TOTAL | 9,145 | 115,930 | $3,205,396.56 |
| Alachua | 82 | 830 | 26,565.44 |
| Baker | 8 | 73 | 1,950.56 |
| Bay | 53 | 553 | 16,808.34 |
| Bradford | 9 | 66 | 2,066.60 |
| Brevard | 152 | 1,699 | 57,221.63 |
| Broward | 645 | 8,911 | 242,006.26 |
| Calhoun | 8 | 66 | 1,329.16 |
| Charlotte | 66 | 709 | 18,560.45 |
| Citrus | 38 | 537 | 13,299.24 |
| Clay | 20 | 181 | 5,179.24 |
| Collier | 55 | 545 | 18,526.76 |
| Columbia | 43 | 418 | 11,785.32 |
| Dade | 2,378 | 33,374 | 1,086,102.47 |
| DeSoto | 16 | 187 | 2,781.53 |
| Dixie | 9 | 85 | 2,928.29 |
| Duval | 587 | 6,797 | 179,210.68 |
| Escambia | 202 | 2,187 | 56,115.68 |
| Flagler | 8 | 99 | 2,266.65 |
| Franklin | 21 | 133 | 2,627.74 |
| Gadsden | 27 | 265 | 4,977.26 |
| Gilchrist | 6 | 74 | 3,525.57 |
| Glades | 7 | 114 | 2,687.55 |
| Gulf | 2 | 26 | 735.15 |
| Hamilton | 20 | 133 | 2,344.33 |
| Hardee | 7 | 80 | 1,807.91 |
| Hendry | 5 | 64 | 1,338.38 |
| Hernando | 31 | 286 | 7,776.37 |
| Highlands | 26 | 313 | 7,788.87 |
| Hillsborough | 764 | 9,428 | 193,857.14 |
| Holmes | 36 | 318 | 7,465.51 |
| Indian River | 52 | 540 | 15,134.64 |
| Jackson | 33 | 275 | 6,636.36 |
| Jefferson | 6 | 88 | 2,233.28 |
| Lafayette | 10 | 115 | 2,158.24 |
| Lake | 96 | 912 | 24,709.97 |
| Lee | 81 | 951 | 31,644.82 |
| Leon | 62 | 691 | 17,296.81 |
| Levy | 25 | 347 | 11,881.18 |
| Liberty | 9 | 48 | 1,182.59 |
| Madison | 37 | 343 | 9,029.42 |
| Manatee | 120 | 1,646 | 40,288.94 |
| Marion | 124 | 1,681 | 45,975.38 |
| Martin | 44 | 530 | 17,524.48 |
| Monroe | 27 | 352 | 10,057.72 |
| Nassau | 32 | 295 | 8,751.46 |
| Okaloosa | 36 | 335 | 9,481.88 |
| Okeechobee | 13 | 138 | 3,513.91 |
| Orange | 503 | 6,482 | 152,813.79 |
| Osceola | 53 | 572 | 12,757.06 |
| Palm Beach | 425 | 5,080 | 155,444.73 |
| Pasco | 61 | 720 | 15,813.40 |
| Pinellas | 651 | 9,230 | 220,493.19 |
| Polk | 161 | 1,837 | 43,898.25 |
| Putnam | 40 | 464 | 14,287.60 |
| St. Johns | 93 | 1,008 | 23,337.64 |
| St. Lucie | 112 | 1,499 | 38,313.84 |
| Santa Rosa | 62 | 659 | 17,994.50 |
| Sarasota | 174 | 2,505 | 62,407.82 |
| Seminole | 140 | 1,638 | 43,133.31 |
| Sumter | 40 | 414 | 12,125.38 |
| Suwannee | 23 | 282 | 5,955.89 |
| Taylor | 32 | 332 | 9,982.59 |
| Union | 7 | 65 | 1,392.10 |
| Volusia | 362 | 4,572 | 120,090.92 |
| Wakulla | 1 | 3 | 89.82 |
| Walton | 46 | 397 | 8,819.59 |
| Washington | 21 | 333 | 7,107.96 |

## HOSPITAL LICENSING PROGRAM

As in every year since the inception of the hospital licensing law the program has been served by the Advisory Hospital Council whose members are appointed by the Governor. During the current year the Council members included the State Health Officer, serving as chairman-ex officio, Honorable James H. Sweeney, Jr., DeLand; W. W. Richardson, M.D., Graceville; A. W. Forehand, Tallahassee; John F. Wymer, West Palm Beach; Walter D. Griffin, Jr., Jacksonville; and Richard C. Cumming, M.D., Ocala.

During the year one hospital was officially denied license as the result of a hearing in which the owner did not appeal, and legal action is in process to hold a hearing for denial of license to another proprietary hospital.

In recent years there has been a continued interest in the nursing home industry to secure licensing for some institutions such as psychiatric, chronic disease, and/or rehabilitation hospitals. Some nursing homes have approached the SBH for approval of dual licensure: i.e., to have part of a facility licensed as a nursing home (extended care facility) and part licensed as a medical or general hospital. During the year no proposed conversions of nursing homes to hospitals were allowed, nor any dual licenses issued. Two nursing homes, however, are under consideration at the close of the year, pending qualification and licensing: one as a psychiatric hospital; the other as a general hospital, exclusive of obstetrics.

The number of licensed hospitals continues to remain relatively stable, although the growth in available hospital beds has increased by approximately 33 per cent since 1960. This trend represents an increase in size of hospitals in urban areas, and the gradual elimination of small institutions considered to be submarginal.

Of the 12 new hospitals opened during the year, eight were new construction; one represented a hospital whose license had expired and was renewed; two were replacement facilities for existing hospitals; and one both opened and closed during the year. Four older hospitals ceased operation: two were replaced by new facilities; one reduced bed complement below 10 beds and thus is not subject to licensure and one voluntarily closed.

There has been an upsurge in privately financed hospital construction after a marked decline in 1964. This is thought to reflect, in part, the anticipated demand for additional hospital beds with the advent of the health insurance benefits of the Social Security Administration. The number of construction plans reviewed increased by 31 per cent over the previous year, and by 22 per cent over 1963. But the estimated cost of these was $33,500,000 as compared with $35,000,000 in 1964. Surveys for licensure were carried out in 89 hospitals during 1965 and administrative consultations in 76 others.

As has been noted in the past two years, the hospital industry is recognizing the need for more facilities to provide beds for emotionally and mentally disturbed patients. The number of psychiatric beds available at the close of the calendar year was 1384, and with the exception of 34 beds this represents provision for such beds in existing facilities. This is an increase of 26 per cent over 1963 and 16 per cent over 1964.

Evaluation of hospitals against licensing standards remained relatively constant. However, surveys of new construction, renovations and additions were accomplished upon completion. Although greatly reduced in recent years, a disproportionate amount of time continued to be devoted to small hospitals with limited physical facilities and insufficient staffing to meet minimum licensure standards. Assistance was given to these problems by physicians, public health nurses and sanitarians of the various county health departments (CHD).

### TABLE 49

### HOSPITAL EVALUATION STATISTICS, FLORIDA, 1965

| | Hospitals | Beds | Bassinets |
|---|---|---|---|
| Licensed at beginning of year | 181 | 21,284 | 2,605 |
| Ceasing operations | 5 | 506 | 28 |
| Accessions during year | 12 | 2,364 | 86 |
| Licensed at end of year | 188 | 23,136 | 2,663 |
| Unlicensed at end of year | 1 | 27 | 4 |
| Total subject to licensure at end of year | 189[a] | 23,163 | 2,667 |

## NURSING HOME LICENSING PROGRAM

Combined nursing home and home for the aged facilities totaled 277 nursing homes and 55 homes for the aged licensed at the end of 1965, as compared to 274 nursing homes and 73 homes for the aged at the end of 1964. The bed capacity for nursing home beds increased to 14,983 beds from 13,468 beds in 1964 while bed capacity in homes for the aged decreased to 2192 beds in 1965 as compared with 2480 beds in the previous year.

Application for approval of plans for construction continued at a high rate. A total of 171 sets of plans were reviewed with construction costs estimated at $25,709,600. The nursing home consultant made 43 field surveys of evaluation for special problems by request of CHDs, had 60 field consultations for administrative and operational problems and had 260 office consultations on design location and feasibility.

Passage of Senate Bill 890 by the Legislature created the necessity of rewriting regulations governing construction and operation of homes for the aged. It is anticipated that publishing of these regulations will cause a large increase in homes for the aged beds during the coming year.

## TABLE 50

## NURSING HOMES LICENSED BY COUNTY, FLORIDA, 1965

| COUNTY | NUMBER OF HOMES | | | | BED CAPACITY | | | |
|---|---|---|---|---|---|---|---|---|
| | Nursing Homes | Homes for the Aged | Homes for Spec. Serv. | Total | Nursing Homes | Homes for the Aged | Homes for Spec. Serv. | Total |
| Alachua | 1 | 1 | ....... | 2 | 72 | 10 | ....... | 82 |
| Bay | 2 | ....... | ....... | 2 | 143 | ....... | ....... | 143 |
| Bradford | 1 | ....... | ....... | 1 | 50 | ....... | ....... | 50 |
| Brevard | 3 | 1 | ....... | 4 | 174 | 42 | ....... | 216 |
| Broward | 19 | ....... | 1 | 20 | 1249 | ....... | 40 | 1289 |
| Clay | 1 | ....... | ....... | 1 | 18 | ....... | ....... | 18 |
| Dade | 38 | 8 | 2 | 48 | 3063 | 276 | 47 | 3386 |
| Dixie | 1 | ....... | ....... | 1 | 12 | ....... | ....... | 12 |
| Duval | 26 | 10 | ....... | 36 | 1094 | 134 | ....... | 1228 |
| Escambia | 2 | 2 | 1 | 5 | 114 | 28 | 52 | 194 |
| Hardee | ..... | 1 | ....... | 1 | ..... | 24 | ....... | 24 |
| Hernando | 1 | ....... | ....... | 1 | 37 | ....... | ....... | 37 |
| Highlands | 2 | ....... | ....... | 2 | 49 | ....... | ....... | 49 |
| Hillsborough | 29 | 1 | 3 | 33 | 1226 | 64 | 59 | 1349 |
| Holmes | 1 | ....... | ....... | 1 | 36 | ....... | ....... | 36 |
| Indian River | 3 | ....... | ....... | 3 | 136 | ....... | ....... | 136 |
| Jefferson | 1 | ....... | ....... | 1 | 35 | ....... | ....... | 35 |
| Lake | 6 | 2 | ....... | 8 | 145 | 23 | ....... | 168 |
| Lee | 4 | ....... | ....... | 4 | 183 | ....... | ....... | 183 |
| Leon | 2 | ....... | ....... | 2 | 75 | ....... | ....... | 75 |
| Levy | 2 | ....... | ....... | 2 | 47 | ....... | ....... | 47 |
| Manatee | 6 | 3 | ....... | 9 | 310 | 14 | ....... | 324 |
| Marion | 1 | ....... | ....... | 1 | 27 | ....... | ....... | 27 |
| Martin | 1 | ....... | ....... | 1 | 30 | ....... | ....... | 30 |
| Monroe | 1 | 1 | ....... | 2 | 9 | 6 | ....... | 15 |
| Okeechobee | ..... | 1 | ....... | 1 | ..... | 10 | ....... | 10 |
| Orange | 17 | 2 | ....... | 19 | 731 | 170 | ....... | 901 |
| Osceola | 1 | 3 | ....... | 4 | 23 | 38 | ....... | 61 |
| Palm Beach | 17 | 4 | ....... | 21 | 988 | 163 | ....... | 1151 |
| Pasco | 4 | 4 | ....... | 8 | 63 | 62 | ....... | 125 |
| Pinellas | 44 | 6 | 1 | 51 | 2841 | 1016 | 45 | 3902 |
| Polk | 18 | 5 | ....... | 23 | 648 | 114 | ....... | 762 |
| Putnam | 3 | 1 | ....... | 4 | 63 | 11 | ....... | 74 |
| St. Johns | 3 | 2 | ....... | 5 | 155 | 27 | ....... | 182 |
| St. Lucie | 3 | 2 | ....... | 5 | 110 | 44 | ....... | 154 |
| Sarasota | 6 | ....... | ....... | 6 | 294 | ....... | ....... | 294 |
| Seminole | 2 | 2 | 2 | 6 | 45 | 48 | 8 | 101 |
| Sumter | 1 | ....... | ....... | 1 | 25 | ....... | ....... | 25 |
| Suwannee | 1 | ....... | ....... | 1 | 44 | ....... | ....... | 44 |
| Volusia | 17 | 2 | 2 | 21 | 871 | 42 | 150 | 1063 |
| Washington | ..... | 1 | ....... | 1 | ..... | 11 | ....... | 11 |
| SUBTOTALS | 291 | 65 | 12 | 368 | 15,235 | 2,377 | 401 | 18,013 |
| CEASING OPERATIONS IN 1965 | | | | | | | | |
| Bay | ..... | 1 | ....... | 1 | ..... | 10 | ....... | 10 |
| Broward | 3 | ....... | ....... | 3 | 56 | ....... | ....... | 56 |
| Dade | ..... | 1 | ....... | 1 | ..... | 30 | ....... | 30 |
| Duval | 1 | 3 | ....... | 4 | 18 | 80 | ....... | 98 |
| Escambia | 2 | ....... | ....... | 2 | 22 | ....... | ....... | 22 |
| Osceola | 2 | 1 | ....... | 3 | 44 | 10 | ....... | 54 |
| Palm Beach | ..... | 1 | ....... | 1 | ..... | 12 | ....... | 12 |
| Pinellas | 2 | 1 | ....... | 3 | 43 | 10 | ....... | 53 |
| Polk | 3 | ....... | ....... | 3 | 55 | ....... | ....... | 55 |
| St. Johns | ..... | 1 | ....... | 1 | ..... | 5 | ....... | 5 |
| St. Lucie | 1 | ....... | ....... | 1 | 14 | ....... | ....... | 14 |
| Seminole | ..... | 1 | ....... | 1 | ..... | 28 | ....... | 28 |
| SUBTOTALS | 14 | 10 | ....... | 24 | 252 | 185 | ....... | 437 |
| TOTALS | 277 | 55 | 12 | 344 | 14,983 | 2,192 | 401 | 17,576 |

Evaluation and upgrading of substandard facilities continued with the closing of 14 nursing homes and 10 homes for the aged, with a total bed capacity of 252 nursing home beds and 185 beds in homes for the aged. These facilities either ceased operation or were replaced by new facilities.

The interest of nursing home operators and the Florida Nursing Home Association members in accreditation for Medicare continued to be an effective media for stimulating interest in remodeling and constructing long-term care facilities.

### TRAINING AND EDUCATION

The Seventh Annual Nursing Home Short Course was conducted by the Florida Institute for Continuing University Studies, in cooperation with the SBH and the Florida Nursing Home Association (FNHA). Ninety-four administrators and nurses attended. Particular emphasis was placed on training, personnel management and uniform expense accounting. During the year, staff members presented lectures on administration, principles of patient care, rehabilitation, record keeping and safety in six district workshops of the FNHA. Assistance also was provided this organization in the development of a continuing education program.

The cooperative undergraduate program introduced in 1962 with the College of Architecture and Fine Arts, University of Florida, continued in 1965 with 22 fourth-year architectural students participating. The purpose of the arrangement was to teach health principles and concepts in the design of medical care and related facilities. The program included an orientation seminar, field visits, a design problem and progressive evaluation sessions of students' work in which faculty and representatives of the division participate.

A second Statewide Nursing Home and Hospital Fire Protection Conference was conducted in Orlando in December, to provide additional fire safety information to administrators and personnel of medical care and related facilities, fire departments, SBH and CHDs, architects, engineers, and local electrical, building and zoning authorities. Featured were demonstrations on the recognition of fire hazards in handling flammable liquids and gases, and patient evacuation procedures during emergencies. A total of 220 attended from 27 counties. The conference was co-sponsored by the SBH, Office of the State Fire Marshal (OSFM), Florida State Fire College, FNHA, Florida Hospital Association (FHA), Florida Fire Chiefs' Association, and Florida State Firemen's Association.

Services provided by the nurse consultant assigned to this division resulted in 28 visits to 18 CHDs to assist them in the evaluation of the nursing service in 50 nursing homes. Improvements recommended included the formulation of definitive nursing objectives, personnel policies and job descriptions, the development of patient care plans and the application of aspetic techniques and appropriate methods for administering drugs and keeping records. (See Division of Public Health Nursing elsewhere in this report.)

Dietary consultation services were provided 65 institutions in 26 counties by the institutional nutrition consultant assigned to the division. This activity accounted for 55 visits to 44 nursing homes and 34 visits to 21 hospitals. Regional and county nutritionists furnished additional services to nursing homes and hospitals in Bay, Dade, Dixie, Highlands, Hillsborough, Jackson, Levy, Marion, Palm Beach, Pasco, Sumter and Washington Counties. In Hillsborough, the county nutritionist participated as a member of the CHD nursing home survey team and conducts semi-annual food service evaluations of the county's 32 homes. Regular assistance was provided institutions in the development of special diets and menu planning. In Dade County the nutritionist worked with the health department surveillance team in evaluating food service in nursing homes and coordinated the review of kitchen plans for new and remodeled facilities with state staff.

Three workshops on food preparation for the county's food service personnel were conducted. The total attendance included 78 representatives from 26 nursing homes and homes for the aged. Plans for food service facilities of 20 proposed nursing homes and hospitals were reviewed by the division's institutional nutrition consultant.

A total of 72 visits was made to 23 counties to aid clergy and church groups which were interested in the development of retirement housing arrangements and nursing home facilities. Liaison activities were conducted throughout the year with CHDs, the Board of Commissioners of State Institutions, Division of Community Hospitals and Medical Facilities, Federal Housing Administration, and Small Business Administration, to correlate community needs for nursing homes and to explore financial aid available to organizations for the construction of church-related projects. Major consultation emphasis was placed in West Florida which has relatively few nursing homes. As a consequence, community church organizations and lay leaders in eleven counties undertook steps for the realization of nursing care facilities. The construction of church-related nursing homes is progressing currently in Indian River, Lee, Palm Beach, Polk and Volusia Counties.

A revision of the SBH Hospital licensure regulations was initiated at the suggestion of the Hospital Advisory Council. A proposed cooperative arrangement with the OSFM was developed for the purpose of assuring fire inspection coverage of medical care facilities located particularly in non-urban areas and to provide a consultative mechanism with regard to problem institutions.

Planning sessions were held for a seminar for practicing architects and engineers on functional design of medical care and related facilities, a dietary consultation workshop for dietitians who may serve nursing homes and small hospitals, and short courses for nursing home personnel.

## BUREAU OF VITAL STATISTICS

EVERETT H. WILLIAMS, Jr., M.S., Hyg.
Director

The year 1965 was one of reorganization for the bureau. A position of director for the Division of Vital Records was established and this was also the first full year of operation of the IBM 1401 Electronic Computer System which was installed in late 1964. All ongoing programs were reviewed during the year, revised to take advantage of the capabilities of the computer, and stress was laid on fully documenting all procedures to promote efficiency even at times when there is a turnover in personnel.

Mr. Oliver H. Boorde, director of the Division of Public Health Statistics, is on leave of absence to obtain a Master's Degree in Public Health at the University of Pittsburgh Graduate School. This will increase the bureau's capabilities for statistical consultation in future years.

There was very little change in the total efficiency for collecting birth and death records in Florida during the year as is attested by the Vital Statistics Scoreboard shown in this report. Many counties made excellent records and the top 20 counties on the list leave very little to be desired in the way of performance. Our special commendation is extended to the following registration areas which comprise the top 10: Jacksonville-Duval, Citrus, Martin, Manatee, Orange, St. Johns, Hillsborough, Volusia, Alachua and Escambia. However, those counties near the bottom of the list should make efforts to improve. County health officers are urged to take appropriate action.

## DIVISION OF DATA PROCESSING

HAROLD F. GOODWIN
Director

Data processing activities usually are not restricted to individual organizational units but tend to cross organizational lines. Further, the products of data processing are used on an agency-wide basis and have broad management implications. Because of these factors, this division functions as a service division to all other bureaus, divisions and county health departments (CHD). The responsibilities assigned to this division can be placed in two main categories: Systems and Procedures, and Data Processing.

### Systems and Procedures

Data processing systems are designed to achieve the approved objectives in the most effective manner and not to fit some predetermined pattern of organization, procedure or machine installation. Therefore, this area concerns itself with manual systems as well as those which lend themselves to computer processing. The major responsibilities assigned to this area are the design of forms and coding schemes to capture information, the procedures and steps necessary to data collection, and the computer programming required to generate reports or tabulations.

During the past year, many one-time requests for data processing services were programmed and produced, and a number of recurring projects installed. The most important of these were:

*Administration* — The Personnel Directory, covering central office employees, was studied early in the year and found to be a logical machine application since the updating, or keeping the file current, could be accomplished using the same employment and termination information received by this division for payroll purposes. A statewide directory is planned for early next year and a copy published for each CHD.

*Vital Statistics* — The addressing of birth notification envelopes, previously typed by personnel in the Division of Vital Records, was converted to a computer application early in the year. Machine produced address slips are now used, resulting in a saving of about ten days labor per month.

*Personnel* — A state-wide system of reporting personnel actions was installed in April and has proved to be valuable in many areas requiring personnel statistics and payroll information.

*Radiological Health* — Computer programming necessary to calculate radiation content in material tested at the Orlando Laboratory became operational during this year.

### Data Processing

This function is responsible for the reduction of data to punch card form as well as the scheduling and production of all reports and tabulations. Although it has been the first year of complete computer processing, which is considered the most trying, it has been most successful.

Many projects have undergone total change in production methods during the year to take advantage of the computer system's speed and capabilities. Most of these modifications required complete re-programming but have resulted in less manual handling of data, increased speed of production and earlier distribution of results.

## DIVISION OF PUBLIC HEALTH STATISTICS

OLIVER H. BOORDE, B.S.B.A.
Director (on educational leave)

This division is responsible for summarizing and analyzing data obtained from vital records and special studies. It also provides statistical support and consultation to all bureaus and divisions of the State Board of Health (SBH) as well as to County Health Departments (CHD.

During the year, the division publishes a monthly vital statistics bulletin which presents the latest available data on births, deaths, marriages and divorces. Accompanying the bulletin is a monthly article, written by the division staff, concerning various subjects of public health interest. This bulletin is distributed to CHDs, hospitals, libraries, schools and persons expressing a desire to receive this type of information.

At the end of each year, the division publishes a complete summary and analysis of vital statistics entitled *Florida Vital Statistics*. Also, this division in cooperation with the Bureau of Preventable Diseases, publishes *Florida Morbidity Statistics* — a review and analysis of cases of reportable diseases.

In addition to these formal reports, the division throughout the year provided vital statistics data and analysis from unpublished sources to physicians, faculty members and students of educational institutions and other persons having a need for this type of information.

In the area of statistical consultation, the division has experienced a continually increasing demand for its services. The consultation services provided consist of assistance in practically every phase of conducting a special study or survey, from concise statement of objectives, design of forms and sample framework, collection of data, methods of tabulating data, statistical analysis and interpretation to the presentation of the final report.

The division has provided assistance on a number of special studies conducted during 1965. However, three special programs are worthy of particular note as they have taken up a substantial amount of the division's time. These programs are the Statistical and Tabulating Center for Cancer Registry Data (SCCR), the Immunization Program and the Community Study on Pesticides. The Cancer Registry and Immunization Program were initiated in 1963 while the Pesticides Project began in 1965.

The SCCR is under the direction of the Bureau of Chronic Diseases. This program was begun in July, 1963 and its principal objective is to gather the vast amount of valuable data being collected by the approved tumor clinics throughout the state into a central data collection unit. This unit is equipped to analyze and present summarized data to the medical staffs of the tumor clinics. In addition, this information should prove to be invaluable for improving the effectiveness of the state's cancer research and service programs.

The Immunization Program is administered by the Bureau of Preventable Diseases and its objective is to raise the immunization level of preschool children against poliomyelitis, diphtheria, whooping cough, tetanus and smallpox. Birth certificates filed with the

Bureau of Vital Statistics are being utilized as a means of contacting parents of young children. This division has been given the responsibility for designing procedures to determine the pre- and post-program immunization levels of 15-month-old children in counties participating in the project. The determination of these levels will provide a means of evaluating the effectiveness of the program and with the methods being employed should indicate which segments of the population require additional attention. Baseline data has been obtained for 30 counties participating in the program.

The Community Pesticides Study is administered by the Deputy State Health Officer and its objective is to determine if pesticides constitute a hazard to human health. This division has been given the responsibility for designing and initiating studies to investigate the relationship of morbidity and mortality to the use of pestcides among the occupationally exposed persons and the extent of acute poisoning in the general population. Pest control personnel registered with the Bureau of Entomology are being used as the basic study group.

This report presents a brief summary of preliminary vital statistics for 1965. A more detailed analysis of these statistics can be found in *Florida Vital Statistics, 1965*. Preliminary 1965 birth and death figures have been used in this report because of a time lag in receipt of records from the counties and the extensive processing required to summarize the data in final form. Final 1965 data concerning marriages, divorces and annulments are contained in Table 58; and Tables 55 and 57 present final 1964 natality and mortality figures.

### Population

Based on an estimate as of July 1, 1965, Florida's population rose to 5,805,000, an increase of 58.2 per cent over the 1955 population of 3,670,000. This gives an average increase of about 17,792 persons per month since July 1, 1955. Natural increase (the difference between the number of births and the number of deaths) accounted for about 32 per cent (5634 persons) of this monthly figure and in-migration for about 68 per cent (12,158 persons).

The white population increased from 2,969,800 in 1955 to an estimated 4,775,800 in 1965, or about 15,050 persons per month. Natural increase represented 25 per cent of this monthly figure, and in-migration about 75 per cent. On the other hand, the nonwhite population estimate rose to 1,029,200 in 1965, a monthly increase of 2742 since 1955, with natural increase contributing 69 per cent, and in-migration representing 31 per cent.

### Births

The 1965 preliminary birth figure of 107,006 indicates about a 6.0 per cent decrease from the 1964 total of 113,966. The number of white births experienced a decrease of 8.0 per cent (77,316 to

84,386) while nonwhite births dropped 3.0 per cent (30,599 to 29,690). The 8.0 per cent decrease is in line with a downward trend which has been in effect since 1955. The rate for whites of 16.2 births per 1000 population represents a 9.0 per cent drop during the past year; and the rate for nonwhites of 28.8 is down 5.0 per cent. The trend in the rate for whites has been generally downward over the entire period from 1955 to 1965, whereas the nonwhite rate began to drop in 1957. The present rate for nonwhites was 77.8 per cent higher than for whites, which is consistent with past experience.

#### Deaths

Preliminary figures for the state show 59,080 resident deaths in 1965, an increase of 2327 or 4.1 per cent over the 1964 figure (56,753). Of these deaths, 49,291 were white residents, an increase of 4.8 per cent over 1964 deaths (47,021), and 9789 were nonwhite, an increase of 0.6 per cent over 1964 figures (9732).

This rise in the number of deaths can be attributed primarily to population increase, since the death rate for both races changed only slightly during 1965. The drop in the death rate among nonwhites is consistent with the trend over the last decade; also, the slight rise in rate for whites is consistent with the pattern over this same period. The rising death rate recorded in recent years among whites is no doubt, in large part, due to the in-migration of vast numbers of white retirees, who are in high death rate groups. This could also be the reason for the higher rate among whites as compared with nonwhites.

The 10 leading causes of death with rates per 100,000 population in 1965 and the comparative position of these causes in 1955 are presented in Table 53. There has been little change in rankings during the 1955-1965 period. The first four causes have remained in the same position for the last 11 years. The top three ranked diseases — heart disease, cancer and cerebral vascular disease — which are more prevalent among the aged, have shown an increase in rate during the period. This rise in death rate is probably due to the relatively rapid growth in Florida's older population. Causes of death not associated with the aged, such as accidents and diseases of early infancy, have shown a slight decline in rate. As a result, diseases of early infancy dropped from fifth to sixth and influenza and pneumonia, with a slight rise in rate, rose in rank from sixth to fifth.

The remaining causes — other circulatory diseases, diabetes mellitus and general arteriosclerosis — are chronic or more prevalent among the aged. Of these causes only general arteriosclerosis showed a decline since 1955. "Other circulatory diseases" has moved from 14th to seventh place, with a rate more than twice that of 1955 (9.1 to 18.4). Suicides rose from 10th to ninth position and diabetes mellitus dropped from eighth to 10th place since 1955.

Congenital malformations fell from the top 10, down from ninth to 12th position.

#### Infant Deaths

Provisional infant mortality data show that 3027 infants (less than one year of age) died in Florida during 1965, resulting in a rate per 1000 live births of 28.3, a 1.7 per cent decline from the 1964 rate of 28.8. There were 1734 white infant deaths with a rate of 22.4 and 1293 nonwhite infant deaths with a rate of 43.6. Since 1955 the rates for whites and nonwhites have dropped 2.6 and 6.8 per cent, respectively.

#### Marriages, Divorces and Annulments

The number of marriages in Florida increased from 29,904 in 1955 to 49,399 during 1965, or about 65 per cent. However, the rate per 1000 population rose only 4.9 per cent since 1955 (8.1 to 8.5). There were 41,565 white marriages and 7834 nonwhite marriages in 1965. The current rates of 8.7 for white and 7.6 for nonwhite compare with rates of 8.0 and 8.8 in 1955.

Divorces and annulments rose to 25,333 during 1965, compared with 19,999 granted in 1955 (up 26.7 per cent). The rate per 1000 population decreased during the 11 year period from 5.4 to 4.4 (down 18.5 per cent). Race is not recorded on divorce reports.

## DIVISION OF VITAL RECORDS

CHARLES H. CARTER
Director

The primary responsibility of this division is the collection of those documents defined as vital records: records having personal, legal and public health value. The value of a vital record flows from the fact that the record is made at the time the event occurred, by one who has knowledge of the facts recorded, and by one required by law to make the record. Specifically, records of births, deaths, stillbirths, marriages, divorces, adoptions, annulments and legal changes of name are vital records.

Additional division responsibilities are the protection, preservation, legal amendment and issuance of certified copies of these records.

#### Division Director

The first full-time director for the division reported on July 1, 1965. In addition to other benefits, the filling of this position will permit the Bureau of Vital Statistics to provide needed consultant and training services of an administrative and technical nature to local registrars, their deputies, sub-registrars and others employed in the collection of vital statistics.

### Validating Machine

The first validating machine to be used in the division was installed during the year in the fee receipts section. This machine provides better internal control over cash receipts, provides a permanent auditor's tape, meets acceptable accounting standards and allows individual machine receipts to be provided each applicant, whether by mail or in person.

### Electric Certifier

An electric Protectograph certifier was also placed into operation during the year. The increasing workload had made obsolete the old manual operation of imprinting a raised seal by hand on each certification. The new machine imprints a multi-colored certification on the reverse of each document.

### Reindexing of Old Records

The much needed project of the reindexing of old records continued, as time allowed. The preparation of new and better indexes for those vital records collected prior to 1945 was started in 1958 and has been carried on when current work permitted. This is tedious work and proceeds slowly, chiefly because of great difficulty in interpretation of the hand-written names on the old certificates.

When the new indexes are completed, they will provide a much more rapid, reliable and efficient method of searching these older records. However, because of increasing workload, current staff is able to spend less and less time on this project.

### Certificates Received

During 1965, a total of 241,604 certificates of all kinds were received, processed and filed in permanent binders. In 1965, the 68 registration districts of the state increased the percentage of death certificates filed within the time limit prescribed by Chapter 382. Florida Statutes. Of 60,756 death certificates filed, 97.6 per cent were submitted on time. Of 104,973 birth certicates filed 93.9 per cent were received within the required period. (Table 59 and also Table 51).

### Certifications Issued

The increased use of vital records is underscored by the fact that a total of 128,971 requests for searches or for certifications of personal records were processed during 1965. This represents an increase of 7.4 per cent over 1964.

### Corrections and Amendments to Records

A total of 7727 records were amended or corrected during the year. The majority of these required multiple exchange of correspondence. When properly done, the correction of vital records is an exacting task (Table 51).

### Adoptions

The processing of adoption reports is a steadily increasing factor in the division workload. A total of 5110 final decrees of adoption was processed during the year and at the end of 1965, adoption reports were being processed at the rate of 115 per week. In processing of adoption reports it is necessary to work with parents, attorneys, welfare and child placement organizations, clerks of the circuit court, physicians, hospital administrators and others.

### General

Requests from welfare agencies for birth certificates or birth record information total 12,875. Of these, approximately 72.4 per cent were from our own state and local organizations. Medicare and increased Social Security benefits stimulated increased demands both for copies of existing certificates and for assistance in the filing of delayed birth certificates. Veteran administration offices and armed services recruiting offices also made increased demands for certifications. Tabulation at the year's end showed that of 128,971 searches for vital records, 26,871 or 20.1 per cent were for the above or similar agencies for which no charge was made.

### Vital Statistic Scoreboard

To aid in the evaluation of the relative efficiency between registration districts, the Vital Statistics Scoreboard is published annually (Table 59). To further stimulate interest in this, it has been decided to award a certificate of merit, to be signed by the director of the Bureau of Vital Statistics and the State Health Officer, suitably framed, to the registration district with the best performance as shown on the scoreboard. A humorous plaque is to be awarded the registration district finishing in last place on the scoreboard. This plaque is to be passed annually to the next year's winner of last place on the scoreboard. The first such presentation of the certificate and the awarding of the humorous plaque will take place at the 1966 annual meeting of the Florida Public Health Association.

### Restriction Versus Service

One of the knottiest problems facing the division is to minimize red tape in providing copies of certificates to those with the proper interest, while at the same time restricting access to records except to those with such interest.

## TABLE 51

## ACTIVITIES OF THE DIVISION OF VITAL RECORDS, FLORIDA, 1964 AND 1965

| ACTIVITY | 1964 | 1965 | Per Cent Change |
|---|---|---|---|
| Current certificates filed | 239,639 | 241,604 | + 0.8 |
| Delayed birth certificates filed | 2,133 | 2,199 | + 3.0 |
| Amended certificates filed for adoptions | 4,663 | 5,110 | + 9.6 |
| Adoption reports forwarded to other states | 1,024 | 917 | -10.4 |
| Legitimations processed | 501 | 564 | +12.6 |
| Legal changes of name received | 903 | 888 | - 1.7 |
| Requests for certifications or searches | | | |
| Total | 120,035 | 128,971 | + 7.4 |
| Fee paid | 96,200 | 102,100 | + 6.1 |
| Free | 23,835 | 26,871 | +12.7 |
| Photostat certifications made | 136,766 | 153,282 | +12.1 |
| Birth registration cards made | 22,218 | 23,969 | + 7.9 |
| Fees collected and forwarded to State Treasurer | $192,492.73 | $209,045.34 | + 8.6 |

## TABLE 52

## RESIDENT BIRTHS AND DEATHS WITH RATES PER 1000 POPUATION, FLORIDA, 1940, 1950, AND 1955-1965

| Year | Midyear Population Estimates | Births | Birth Rate | Deaths | Death Rate |
|---|---|---|---|---|---|
| 1965* | 5,805,000 | 107,006 | 18.4 | 59,080 | 10.2 |
| 1964 | 5,705,000 | 113,966 | 20.0 | 56,753 | 9.9 |
| 1963 | 5,531,000 | 114,729 | 20.7 | 55,609 | 10.1 |
| 1962 | 5,392,000 | 115,248 | 21.4 | 52,639 | 9.8 |
| 1961 | 5,205,000 | 116,683 | 22.4 | 48,690 | 9.4 |
| 1960 | 4,999,000 | 115,610 | 23.1 | 47,937 | 9.6 |
| 1959 | 4,790,000 | 112,733 | 23.5 | 44,179 | 9.2 |
| 1958 | 4,571,000 | 108,014 | 23.6 | 43,353 | 9.5 |
| 1957 | 4,245,000 | 103,806 | 24.5 | 39,937 | 9.4 |
| 1956 | 3,941,000 | 98,320 | 24.7 | 36,705 | 9.3 |
| 1955 | 3,670,000 | 89,112 | 24.3 | 33,295 | 9.1 |
| 1950 | 2,821,000 | 64,370 | 22.8 | 26,525 | 9.4 |
| 1940 | 1,915,100 | 33,696 | 17.6 | 21,458 | 11.2 |

*Provisional data.

## TABLE 53

## TEN LEADING CAUSES OF DEATH BY RACE, WITH RATES PER 100,000 POPULATION, FLORIDA, 1955 AND 1965

| 1965 Rank | CAUSE OF DEATH | NUMBER OF DEATHS | | | | | | RATE** | | | | | | 1955 Rank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1965*** | | | 1955 | | | 1965*** | | | 1955 | | | |
| | | Total | White | Non-white | Total | White | Non-white | Total | White | Non-white | Total | White | Non-white | |
| | TOTAL DEATHS | 59,080 | 49,291 | 9,789 | 33,295 | 25,754 | 7,541 | 10.2* | 10.3* | 9.5* | 9.1* | 8.7* | 10.8* | |
| 1 | Diseases of the heart (400–443) | 21,072 | 18,741 | 2,331 | 11,541 | 9,752 | 1,789 | 363.0 | 392.4 | 226.5 | 314.5 | 328.4 | 255.5 | 1 |
| 2 | Malignant neoplasms (140–205) | 10,301 | 9,075 | 1,226 | 5,207 | 4,432 | 775 | 177.5 | 190.0 | 119.1 | 141.9 | 149.2 | 110.7 | 2 |
| 3 | Cerebral vascular disease (330–334) | 6,898 | 5,655 | 1,243 | 3,923 | 2,905 | 1,018 | 118.8 | 118.4 | 120.8 | 106.9 | 97.8 | 145.4 | 3 |
| 4 | All accidents (800–962) | 3,489* | 2,705* | 784* | 2,260 | 1,653 | 607 | 60.1* | 56.6* | 76.2* | 61.6 | 55.7 | 86.7 | 4 |
| 5 | Influenza & pneumonia (480–493) | 1,851 | 1,397 | 454 | 813 | 467 | 346 | 31.9 | 29.3 | 44.1 | 22.2 | 15.7 | 49.4 | 6 |
| 6 | Diseases of early infancy (760–776) | 1,793 | 1,097 | 696 | 1,560 | 932 | 628 | 30.9 | 23.0 | 67.6 | 42.5 | 31.4 | 89.7 | 5 |
| 7 | Other circulatory diseases (451–468) | 1,066 | 915 | 151 | 334 | 275 | 59 | 18.4 | 19.2 | 14.7 | 9.1 | 9.3 | 8.4 | 14 |
| 8 | General arteriosclerosis (450) | 879 | 790 | 89 | 575 | 488 | 87 | 15.1 | 16.5 | 8.6 | 15.7 | 16.4 | 12.4 | 7 |
| 9 | Suicide (963,970–979) | 871 | 823 | 48 | 443 | 422 | 21 | 15.0 | 17.2 | 4.7 | 12.1 | 14.2 | 3.0 | 10 |
| 10 | Diabetes mellitus (260) | 865 | 683 | 182 | 467 | 360 | 107 | 14.9 | 14.3 | 17.7 | 12.7 | 12.1 | 15.3 | 8 |
| 12 | Congenital malformations (750–759) | 608 | 437 | 171 | 449 | 353 | 96 | 10.5 | 9.2 | 16.6 | 12.2 | 11.9 | 13.7 | 9 |

*Rate per 1,000 population
**Based on midyear population estimates
***Provisional data

## TABLE 54

## RESIDENT DEATHS AND DEATH RATES BY CAUSE, BY RACE, FLORIDA, 1965 (PRELIMINARY)

| CAUSE OF DEATH (Numbers in parentheses refer to the International List of Causes of Death) | DEATHS | | | Rate per 100,000 Population | | |
|---|---|---|---|---|---|---|
| | Total | White | Nonwhite | Total | White | Nonwhite |
| ALL CAUSES | 59,080 | 49,291 | 9,789 | 10.2* | 10.3* | 9.5* |
| Tuberculosis of respiratory system (001–008) | 196 | 124 | 72 | 3.4 | 2.6 | 7.0 |
| Tuberculosis, other forms (010–019) | 14 | 5 | 9 | 0.2 | 0.1 | 0.9 |
| Syphilis and its sequelae (020–029) | 90 | 56 | 34 | 1.6 | 1.2 | 3.3 |
| Typhoid fever (040) | 1 | 0 | 1 | — | 0.0 | 0.1 |
| Dysentery, all forms (045–048) | 5 | 3 | 2 | 0.1 | 0.1 | 0.2 |
| Scarlet fever and streptococcal sore throat (050, 051) | 2 | 0 | 2 | — | 0.0 | 0.2 |
| Diphtheria (055) | 1 | 0 | 1 | — | 0.0 | 0.1 |
| Whooping Cough (056) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Meningococcal infections (057) | 30 | 20 | 10 | 0.5 | 0.4 | 1.0 |
| Acute poliomyelitis (080) | 1 | 0 | 1 | — | 0.0 | 0.1 |
| Acute infectious encephalitis (082) | 17 | 12 | 5 | 0.3 | 0.3 | 0.5 |
| Measles (085) | 10 | 4 | 6 | 0.2 | 0.1 | 0.6 |
| All other diseases classified as infective and parasitic (030 to 138 with exception of above causes) | 237 | 178 | 59 | 4.1 | 3.7 | 5.7 |
| Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues (140–205) | 10,301 | 9,075 | 1,226 | 177.5 | 190.0 | 119.1 |
| Diabetes Mellitus (260) | 865 | 683 | 182 | 14.9 | 14.3 | 17.7 |
| Anemias (290–293) | 128 | 88 | 40 | 2.2 | 1.8 | 3.9 |
| Major cardiovascular-renal disease | 30,650 | 26,597 | 4,053 | 528.0 | 556.9 | 393.8 |
| Cerebral vascular disease (330–334) | 6,898 | 5,655 | 1,243 | 118.8 | 118.4 | 120.8 |
| Diseases of the heart | 21,072 | 18,741 | 2,331 | 363.0 | 392.4 | 226.5 |
| Rheumatic fever (400–402) | 10 | 4 | 6 | 0.2 | 0.1 | 0.6 |
| Chronic rheumatic heart disease (410–416) | 465 | 419 | 46 | 8.0 | 8.8 | 4.5 |
| Arteriosclerotic heart disease, coronary disease (420) | 16,649 | 15,287 | 1,362 | 286.8 | 320.1 | 132.3 |
| Nonrheumatic chronic endocarditis and myocardial degeneration (421, 422) | 1,185 | 981 | 204 | 20.4 | 20.5 | 19.8 |
| Hypertension with heart disease (440–443) | 1,461 | 958 | 503 | 25.2 | 20.1 | 48.9 |
| Other diseases of heart (430–434) | 1,302 | 1,092 | 210 | 22.4 | 22.9 | 20.4 |
| Hypertension without heart disease (444–447) | 407 | 265 | 142 | 7.0 | 5.5 | 13.8 |
| General arteriosclerosis (450) | 879 | 790 | 89 | 15.1 | 16.5 | 8.6 |
| Other circulatory disease (451–468) | 1,066 | 915 | 151 | 18.4 | 19.2 | 14.7 |
| Chronic and unspecified nephritis (592–594) | 328 | 231 | 97 | 5.7 | 4.8 | 9.4 |
| Influenza (480–483) | 73 | 46 | 27 | 1.3 | 1.0 | 2.6 |
| Pneumonia (490–493) | 1,778 | 1,351 | 427 | 30.6 | 28.3 | 41.5 |
| Ulcer of stomach and duodenum (540, 541) | 290 | 257 | 33 | 5.0 | 5.4 | 3.2 |
| Intestinal obstruction and hernia (560, 561, 570) | 309 | 256 | 53 | 5.3 | 5.4 | 5.1 |
| Gastritis, duodenitis, enteritis and colitis, except diarrhea of the newborn (543, 571, 572) | 285 | 198 | 87 | 4.9 | 4.1 | 8.5 |
| Cirrhosis of liver (581) | 774 | 678 | 96 | 13.3 | 14.2 | 9.3 |
| Acute nephritis and nephrosis (590, 591) | 45 | 26 | 19 | 0.8 | 0.5 | 1.8 |
| Hyperplasia of prostate (610) | 111 | 92 | 19 | 1.9 | 1.9 | 1.8 |
| Complications of pregnancy, childbirth and the puerperium (640–652, 660, 670–689) | 42 | 19 | 23 | 3.9** | 2.5** | 7.7** |
| Congenital malformations (750–759) | 608 | 437 | 171 | 10.5 | 9.2 | 16.6 |
| Birth injuries, postnatal asphyxia and atelectasis (760–762) | 715 | 463 | 252 | 12.3 | 9.7 | 24.5 |
| Infection of the newborn (763–768) | 132 | 61 | 71 | 2.3 | 1.3 | 6.9 |
| Other diseases peculiar to early infancy, and immaturity unqualified (769–776) | 946 | 573 | 373 | 16.3 | 12.0 | 36.2 |
| Symptoms, senility, and ill-defined causes (780–795) | 1,228 | 804 | 424 | 21.2 | 16.8 | 41.2 |
| All other diseases (residual) | 4,259 | 3,435 | 824 | 73.4 | 71.9 | 80.1 |
| Motor vehicle accidents (810–835) | 1,635 | 1,334 | 301 | 28.2 | 27.9 | 29.2 |
| All other accidents (800–802, 840–962) | 1,854 | 1,371 | 483 | 31.9 | 28.7 | 46.9 |
| Suicide and self-inflicted injury (963, 970–979) | 871 | 823 | 48 | 15.0 | 17.2 | 4.7 |
| Homocide and operations of war (964, 965, 980–999) | 577 | 222 | 355 | 9.9 | 4.6 | 34.5 |
| Infant mortality (Deaths under one year of age) | 3,027 | 1,734 | 1,293 | 28.3*** | 22.4*** | 43.6*** |

*Rate per 1000 Population
***Rate per 1000 Live Births
**Rate per 10,000 Live Births
—Less than 0.05 per 100,000 Population

## TABLE 55

## RESIDENT DEATHS AND DEATH RATES BY CAUSE, BY RACE, FLORIDA, 1964 (FINAL FIGURES)

| CAUSE OF DEATH (Numbers in parentheses refer to the International List of Causes of Death) | DEATHS | | | Rate per 100,000 Population | | |
|---|---|---|---|---|---|---|
| | Total | White | Nonwhite | Total | White | Nonwhite |
| ALL CAUSES | 56,753 | 47,021 | 9,732 | 9.9* | 10.0* | 9.6* |
| Tuberculosis of respiratory system (001–008) | 197 | 123 | 74 | 3.5 | 2.6 | 7.3 |
| Tuberculosis, other forms (010–019) | 15 | 10 | 5 | 0.3 | 0.2 | 0.5 |
| Syphilis and its sequelae (020–029) | 70 | 33 | 37 | 1.2 | 0.7 | 3.7 |
| Typhoid fever (040) | 2 | 1 | 1 | — | — | 0.1 |
| Dysentery, all forms (045–048) | 3 | 0 | 3 | 0.1 | 0.0 | 0.3 |
| Scarlet fever and streptococcal sore throat (050, 051) | 5 | 2 | 3 | 0.1 | — | 0.3 |
| Diphtheria (055) | 2 | 1 | 1 | — | — | 0.1 |
| Whooping Cough (056) | 2 | 1 | 1 | — | — | 0.1 |
| Meningococcal infections (057) | 23 | 14 | 9 | 0.4 | 0.3 | 0.9 |
| Acute poliomyelitis (080) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Acute infectious encephalitis (082) | 15 | 7 | 8 | 0.3 | 0.1 | 0.8 |
| Measles (085) | 6 | 3 | 3 | 0.1 | 0.1 | 0.3 |
| All other diseases classified as infective and parasitic (030 to 138 with exception of above causes) | 210 | 142 | 68 | 3.7 | 3.0 | 6.7 |
| Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues (140–205) | 9,701 | 8,516 | 1,185 | 170.0 | 181.4 | 117.3 |
| Diabetes Mellitus (260) | 911 | 707 | 204 | 16.0 | 15.1 | 20.2 |
| Anemias (290–293) | 128 | 84 | 44 | 2.2 | 1.8 | 4.4 |
| Major cardiovascular-renal disease | 29,518 | 25,454 | 4,064 | 517.4 | 542.2 | 402.3 |
| Cerebral vascular disease (330–334) | 6,284 | 5,139 | 1,145 | 110.1 | 109.5 | 113.3 |
| Diseases of the heart | 20,594 | 18,124 | 2,470 | 361.0 | 386.1 | 244.5 |
| Rheumatic fever (400–402) | 14 | 8 | 6 | 0.2 | 0.2 | 0.6 |
| Chronic rheumatic heart disease (410–416) | 479 | 424 | 55 | 8.4 | 9.0 | 5.4 |
| Arteriosclerotic heart disease, coronary disease (420) | 16,199 | 14,731 | 1,468 | 283.9 | 313.8 | 145.3 |
| Nonrheumatic chronic endocarditis and myocardial degeneration (421, 422) | 1,238 | 1,024 | 214 | 21.7 | 21.8 | 21.2 |
| Hypertension with heart disease (440–443) | 1,417 | 926 | 491 | 24.8 | 19.7 | 48.6 |
| Other diseases of heart (430–434) | 1,247 | 1,011 | 236 | 21.9 | 21.5 | 23.4 |
| Hypertension without heart disease (444–447) | 398 | 277 | 121 | 7.0 | 5.9 | 12.0 |
| General arteriosclerosis (450) | 893 | 795 | 98 | 15.7 | 16.9 | 9.7 |
| Other circulatory disease (451–468) | 1,020 | 897 | 123 | 17.9 | 19.1 | 12.2 |
| Chronic and unspecified nephritis (592–594) | 329 | 222 | 107 | 5.8 | 4.7 | 10.6 |
| Influenza (480–483) | 37 | 15 | 22 | 0.6 | 0.3 | 2.2 |
| Pneumonia (490–493) | 1,609 | 1,169 | 440 | 28.2 | 24.9 | 43.6 |
| Ulcer of stomach and duodenum (540, 541) | 322 | 286 | 36 | 5.6 | 6.1 | 3.6 |
| Intestinal obstruction and hernia (560, 561, 570) | 313 | 256 | 57 | 5.5 | 5.5 | 5.6 |
| Gastritis, duodenitis, enteritis and colitis, except diarrhea of the newborn (543, 571, 572) | 299 | 178 | 121 | 5.2 | 3.8 | 12.0 |
| Cirrhosis of liver (581) | 760 | 671 | 89 | 13.3 | 14.3 | 8.8 |
| Acute nephritis and nephrosis (590, 591) | 47 | 33 | 14 | 0.8 | 0.7 | 1.4 |
| Hyperplasia of prostate (610) | 127 | 102 | 25 | 2.2 | 2.2 | 2.5 |
| Complications of pregnancy, childbirth and the puerperium (640–652, 660, 670–689) | 60 | 24 | 36 | 5.3** | 2.9** | 11.8** |
| Congenital malformations (750–759) | 642 | 489 | 153 | 11.3 | 10.4 | 15.1 |
| Birth injuries, postnatal asphyxia and atelectasis (760–762) | 775 | 512 | 263 | 13.6 | 10.9 | 26.0 |
| Infection of the newborn (763–768) | 170 | 79 | 91 | 3.0 | 1.7 | 9.0 |
| Other diseases peculiar to early infancy, and immaturity unqualified (769–776) | 986 | 581 | 405 | 17.3 | 12.4 | 40.1 |
| Symptoms, senility, and ill-defined causes (780–795) | 993 | 604 | 389 | 17.4 | 12.9 | 38.5 |
| All other diseases (residual) | 3,982 | 3,281 | 701 | 69.8 | 69.9 | 69.4 |
| Motor vehicle accidents (810–835) | 1,616 | 1,332 | 284 | 28.3 | 28.4 | 28.1 |
| All other accidents (800–802, 840–962) | 1,880 | 1,401 | 479 | 33.0 | 29.8 | 47.4 |
| Suicide and self-inflicted injury (963, 970–979) | 773 | 743 | 30 | 13.5 | 15.8 | 3.0 |
| Homocide and operations of war (964, 965, 980–999) | 554 | 167 | 387 | 9.7 | 3.6 | 38.3 |
| Infant mortality (Deaths under one year of age) | 3,283 | 1,912 | 1,371 | 28.8*** | 22.9*** | 44.8*** |

*Rate per 1000 Population
***Rate per 1000 Live Births
**Rate per 10,000 Live Births
—Less than 0.05 per 100,000 Population

## TABLE 56

### ESTIMATED POPULATION AND RESIDENT BIRTHS, DEATHS, AND INFANT DEATHS, BY RACE, BY COUNTY, FLORIDA, 1965 (PRELIMINARY)

| COUNTY | Population 1965 Prov. Est. | BIRTHS | | | DEATHS | | | INFANT DEATHS | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | White | Non-White | Total | White | Non-White | Total | White | Non-White |
| STATE | 5,805,000 | 107,006 | 77,316 | 29,690 | 59,080 | 49,291 | 9,789 | 3,027 | 1,734 | 1,293 |
| Alachua | 88,300 | 1,982 | 1,374 | 608 | 634 | 388 | 246 | 55 | 26 | 29 |
| Baker | 8,000 | 181 | 123 | 58 | 83 | 64 | 19 | 6 | 2 | 4 |
| Bay | 68,400 | 1,581 | 1,298 | 283 | 495 | 399 | 96 | 36 | 24 | 12 |
| Bradford | 12,800 | 219 | 152 | 67 | 142 | 111 | 31 | 7 | 3 | 4 |
| Brevard | 192,200 | 4,421 | 3,720 | 701 | 984 | 835 | 149 | 121 | 96 | 25 |
| Broward | 423,800 | 7,275 | 4,876 | 2,399 | 4,553 | 4,005 | 548 | 207 | 91 | 116 |
| Calhoun | 7,700 | 150 | 115 | 35 | 77 | 58 | 19 | 5 | 2 | 3 |
| Charlotte | 19,700 | 180 | 167 | 13 | 336 | 325 | 11 | 3 | 3 | 0 |
| Citrus | 11,800 | 207 | 151 | 56 | 172 | 159 | 13 | 4 | 4 | 0 |
| Clay | 20,700 | 522 | 436 | 86 | 195 | 169 | 26 | 16 | 13 | 3 |
| Collier | 25,200 | 537 | 425 | 112 | 261 | 210 | 51 | 24 | 18 | 6 |
| Columbia | 23,400 | 516 | 338 | 178 | 243 | 138 | 105 | 21 | 6 | 15 |
| Dade | 1,089,200 | 17,373 | 12,258 | 5,115 | 10,452 | 9,109 | 1,343 | 478 | 273 | 205 |
| DeSoto | 13,600 | 206 | 145 | 61 | 145 | 112 | 33 | 7 | 3 | 4 |
| Dixie | 4,900 | 141 | 108 | 33 | 52 | 39 | 13 | 3 | 2 | 1 |
| Duval | 511,500 | 10,921 | 7,763 | 3,158 | 4,291 | 2,945 | 1,346 | 300 | 173 | 127 |
| Escambia | 192,400 | 4,527 | 3,321 | 1,206 | 1,420 | 1,058 | 362 | 137 | 87 | 50 |
| Flagler | 5,700 | 100 | 35 | 65 | 49 | 29 | 20 | 3 | 1 | 2 |
| Franklin | 7,500 | 135 | 117 | 18 | 75 | 57 | 18 | 4 | 3 | 1 |
| Gadsden | 44,000 | 1,036 | 228 | 808 | 364 | 141 | 223 | 51 | 7 | 44 |
| Gilchrist | 3,200 | 54 | 46 | 8 | 33 | 27 | 6 | 1 | 0 | 1 |
| Glades | 3,600 | 60 | 41 | 19 | 33 | 21 | 12 | 1 | 0 | 1 |
| Gulf | 9,500 | 193 | 134 | 59 | 83 | 56 | 27 | 7 | 5 | 2 |
| Hamilton | 8,000 | 189 | 78 | 111 | 91 | 47 | 44 | 8 | 2 | 6 |
| Hardee | 13,400 | 277 | 239 | 38 | 151 | 134 | 17 | 10 | 9 | 1 |
| Hendry | 11,300 | 305 | 191 | 114 | 84 | 47 | 37 | 9 | 3 | 6 |
| Hernando | 12,900 | 233 | 162 | 71 | 198 | 174 | 24 | 10 | 3 | 7 |
| Highlands | 25,000 | 449 | 281 | 168 | 286 | 237 | 49 | 22 | 11 | 11 |
| Hillsborough | 441,900 | 8,816 | 7,010 | 1,806 | 4,407 | 3,755 | 652 | 227 | 153 | 74 |
| Holmes | 11,400 | 158 | 145 | 13 | 111 | 104 | 7 | 7 | 5 | 2 |
| Indian River | 31,800 | 606 | 395 | 211 | 313 | 262 | 51 | 21 | 11 | 10 |
| Jackson | 36,400 | 611 | 395 | 216 | 349 | 235 | 114 | 13 | 7 | 6 |
| Jefferson | 9,700 | 181 | 55 | 126 | 113 | 52 | 61 | 5 | 0 | 5 |
| Lafayette | 2,900 | 38 | 30 | 8 | 37 | 35 | 2 | 1 | 1 | 0 |
| Lake | 62,600 | 1,049 | 725 | 324 | 802 | 703 | 99 | 32 | 22 | 10 |
| Lee | 71,800 | 1,284 | 916 | 368 | 834 | 725 | 109 | 39 | 23 | 16 |
| Leon | 83,000 | 1,696 | 1,075 | 621 | 531 | 289 | 242 | 41 | 19 | 22 |
| Levy | 11,500 | 223 | 123 | 100 | 118 | 82 | 36 | 5 | 1 | 4 |
| Liberty | 2,900 | 55 | 43 | 12 | 33 | 31 | 2 | 1 | 0 | 1 |
| Madison | 14,600 | 283 | 104 | 179 | 144 | 70 | 74 | 14 | 4 | 10 |
| Manatee | 78,100 | 1,076 | 755 | 321 | 1,143 | 1,026 | 117 | 26 | 13 | 13 |
| Marion | 62,200 | 1,284 | 749 | 535 | 642 | 444 | 198 | 48 | 25 | 23 |
| Martin | 22,900 | 367 | 256 | 111 | 286 | 242 | 44 | 9 | 6 | 3 |
| Monroe | 59,500 | 1,338 | 1,192 | 146 | 406 | 341 | 65 | 38 | 30 | 8 |
| Nassau | 19,300 | 377 | 272 | 105 | 165 | 105 | 60 | 10 | 0 | 10 |
| Okaloosa | 78,500 | 2,033 | 1,803 | 230 | 313 | 275 | 38 | 40 | 34 | 6 |
| Okeechobee | 9,000 | 242 | 197 | 45 | 84 | 65 | 19 | 6 | 4 | 2 |
| Orange | 302,200 | 6,115 | 4,730 | 1,385 | 2,403 | 2,061 | 342 | 154 | 110 | 44 |
| Osceola | 21,300 | 344 | 268 | 76 | 344 | 310 | 34 | 16 | 10 | 6 |
| Palm Beach | 279,900 | 4,998 | 3,148 | 1,850 | 3,027 | 2,424 | 603 | 144 | 51 | 93 |
| Pasco | 40,800 | 609 | 504 | 105 | 788 | 759 | 29 | 15 | 12 | 3 |
| Pinellas | 425,500 | 5,385 | 4,124 | 1,261 | 7,134 | 6,766 | 368 | 131 | 72 | 59 |
| Polk | 214,300 | 4,180 | 3,122 | 1,058 | 2,087 | 1,729 | 358 | 124 | 80 | 44 |
| Putnam | 32,800 | 756 | 460 | 296 | 355 | 229 | 126 | 22 | 8 | 14 |
| St. Johns | 32,700 | 538 | 350 | 188 | 409 | 291 | 118 | 21 | 9 | 12 |
| St. Lucie | 46,700 | 1,007 | 524 | 483 | 492 | 364 | 128 | 28 | 11 | 17 |
| Santa Rosa | 35,800 | 895 | 822 | 73 | 230 | 206 | 24 | 20 | 19 | 1 |
| Sarasota | 92,800 | 1,169 | 929 | 240 | 1,317 | 1,240 | 77 | 38 | 26 | 12 |
| Seminole | 69,800 | 1,445 | 1,029 | 416 | 587 | 401 | 186 | 48 | 27 | 21 |
| Sumter | 13,900 | 259 | 167 | 92 | 157 | 116 | 41 | 7 | 4 | 3 |
| Suwannee | 17,000 | 328 | 217 | 111 | 178 | 118 | 60 | 12 | 8 | 4 |
| Taylor | 13,700 | 264 | 179 | 85 | 128 | 87 | 41 | 7 | 4 | 3 |
| Union | 6,500 | 90 | 52 | 38 | 44 | 34 | 10 | 1 | 0 | 1 |
| Volusia | 157,900 | 2,409 | 1,764 | 645 | 2,246 | 1,934 | 312 | 88 | 47 | 41 |
| Wakulla | 5,700 | 88 | 48 | 40 | 51 | 40 | 11 | 2 | 0 | 2 |
| Walton | 16,000 | 216 | 163 | 53 | 170 | 154 | 16 | 7 | 6 | 1 |
| Washington | 12,000 | 224 | 154 | 70 | 120 | 93 | 27 | 3 | 2 | 1 |

## TABLE 57

### ESTIMATED POPULATION, RESIDENT BIRTH AND DEATH RATES PER 1000 POPULATION AND RESIDENT INFANT DEATH RATES PER 1000 LIVE BIRTHS, BY RACE, BY COUNTY, 1964 (FINAL FIGURES)

| COUNTY | Revised Midyear Population Estimate 1964 | BIRTH RATE | | | DEATH RATE | | | INFANT DEATH RATE | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | White | Non-white | Total | White | Non-white | Total | White | Non-white |
| STATE TOTAL | 5,705,000 | 20.0 | 17.8 | 30.3 | 9.9 | 10.0 | 9.6 | 28.8 | 22.9 | 44.8 |
| Alachua** | 87,800 | 24.5 | 22.4 | 31.4 | 7.3 | 5.8 | 12.1 | 24.7 | 17.9 | 40.4 |
| Baker** | 7,900 | 22.8 | 19.2 | 35.0 | 9.6 | 10.3 | 7.2 | 22.2 | 25.6 | 15.9 |
| Bay | 68,100 | 26.0 | 25.2 | 30.5 | 7.0 | 6.8 | 8.5 | 23.1 | 20.6 | 35.0 |
| Bradford | 12,900 | 19.1 | 18.8 | 20.3 | 10.5 | 9.8 | 13.0 | 24.3 | 16.1 | 49.2 |
| Brevard | 171,400 | 26.1 | 24.8 | 38.1 | 5.6 | 5.3 | 8.5 | 23.0 | 17.3 | 56.7 |
| Broward | 406,400 | 18.0 | 14.6 | 35.2 | 10.5 | 10.9 | 8.6 | 33.6 | 21.3 | 58.6 |
| Calhoun | 7,500 | 19.5 | 15.7 | 39.2 | 12.5 | 12.1 | 15.0 | 47.9 | 40.4 | 63.8 |
| Charlotte | 19,200 | 11.9 | 11.1 | 28.8 | 16.2 | 16.3 | 13.8 | 13.2 | 14.6 | 0.0 |
| Citrus | 11,300 | 17.7 | 14.8 | 35.0 | 13.5 | 14.1 | 9.4 | 35.0 | 41.7 | 17.9 |
| Clay | 19,300 | 29.4 | 28.6 | 34.2 | 9.0 | 8.3 | 13.8 | 26.5 | 20.9 | 56.2 |
| Collier | 22,700 | 23.2 | 19.8 | 45.9 | 9.5 | 8.1 | 19.0 | 26.6 | 22.9 | 37.6 |
| Columbia | 22,900 | 25.2 | 23.0 | 30.1 | 11.5 | 10.4 | 13.9 | 39.8 | 24.7 | 65.4 |
| Dade | 1,095,000 | 17.1 | 14.7 | 29.7 | 9.2 | 9.5 | 7.4 | 27.4 | 21.9 | 42.0 |
| DeSoto** | 13,300 | 16.2 | 13.5 | 26.1 | 10.5 | 9.8 | 12.9 | 65.1 | 35.2 | 23.3 |
| Dixie | 4,800 | 24.6 | 21.5 | 42.9 | 10.8 | 10.7 | 11.4 | 25.4 | 11.4 | 66.7 |
| Duval | 510,800 | 23.4 | 22.0 | 28.3 | 8.3 | 7.5 | 11.1 | 28.8 | 24.3 | 40.5 |
| Escambia | 191,200 | 25.4 | 23.4 | 32.4 | 6.7 | 6.2 | 8.5 | 31.4 | 29.8 | 35.6 |
| Flagler | 5,300 | 21.3 | 13.2 | 40.0 | 10.9 | 8.9 | 15.6 | 35.4 | 20.4 | 46.9 |
| Franklin | 7,300 | 25.1 | 21.6 | 38.7 | 12.1 | 11.4 | 14.7 | 43.7 | 32.0 | 69.0 |
| Gadsden** | 44,100 | 24.9 | 14.7 | 31.6 | 8.8 | 7.5 | 9.6 | 64.7 | 23.3 | 77.3 |
| Gilchrist | 3,200 | 18.8 | 17.1 | 30.0 | 9.1 | 7.9 | 17.5 | 33.3* | 41.7* | 0.0* |
| Glades | 3,300 | 20.0 | 20.5 | 19.3 | 7.0 | 5.3 | 9.3 | 30.3* | 0.0* | 74.1* |
| Gulf | 9,500 | 22.5 | 21.6 | 25.5 | 7.4 | 6.3 | 10.9 | 28.0 | 12.7 | 71.4 |
| Hamilton | 7,900 | 21.0 | 17.0 | 25.8 | 11.9 | 10.9 | 13.1 | 24.1 | 13.7 | 32.3 |
| Hardee | 13,100 | 22.1 | 21.8 | 24.6 | 8.9 | 9.0 | 8.5 | 24.2 | 27.2 | 0.0 |
| Hendry | 11,000 | 29.1 | 22.1 | 47.7 | 8.9 | 8.1 | 11.0 | 43.8 | 33.9 | 55.9 |
| Hernando | 12,400 | 23.5 | 22.2 | 28.5 | 11.9 | 13.4 | 6.7 | 17.1 | 14.0 | 26.0 |
| Highlands | 24,500 | 22.0 | 17.3 | 40.0 | 11.8 | 12.0 | 11.2 | 38.9 | 23.8 | 63.7 |
| Hillsborough | 433,100 | 21.1 | 19.7 | 29.6 | 9.7 | 9.5 | 11.0 | 27.7 | 26.4 | 32.8 |
| Holmes | 11,200 | 14.8 | 14.1 | 30.0 | 11.8 | 11.3 | 22.0 | 36.1 | 39.7 | 0.0 |
| Indian River | 31,200 | 21.7 | 18.3 | 34.7 | 11.3 | 11.9 | 8.8 | 41.3 | 33.4 | 56.8 |
| Jackson | 37,000 | 17.4 | 15.4 | 21.8 | 9.8 | 9.6 | 10.4 | 20.2 | 7.6 | 40.3 |
| Jefferson | 9,700 | 23.6 | 14.1 | 30.0 | 10.5 | 9.7 | 11.0 | 43.7 | 18.2 | 51.7 |
| Lafayette | 3,000 | 12.0 | 9.2 | 30.0 | 9.0 | 8.8 | 10.0 | 83.3* | 83.3* | 83.3* |
| Lake | 62,100 | 19.6 | 16.5 | 31.9 | 12.5 | 13.3 | 9.6 | 26.3 | 18.2 | 43.4 |
| Lee | 68,300 | 19.7 | 16.9 | 35.2 | 10.8 | 10.5 | 12.7 | 37.2 | 23.6 | 73.0 |
| Leon** | 82,600 | 21.7 | 20.3 | 24.7 | 7.3 | 6.0 | 10.3 | 34.7 | 24.5 | 52.6 |
| Levy | 11,600 | 17.9 | 14.0 | 26.7 | 11.6 | 11.0 | 13.1 | 19.2 | 26.8 | 10.4 |
| Liberty | 2,800 | 23.2 | 20.8 | 37.5 | 13.9 | 13.3 | 17.5 | 15.4* | 0.0* | 66.7* |
| Madison | 14,700 | 20.8 | 17.0 | 24.9 | 10.6 | 10.5 | 10.7 | 26.1 | 7.8 | 39.5 |
| Manatee | 77,800 | 15.0 | 12.7 | 27.9 | 13.5 | 14.2 | 9.5 | 25.7 | 16.6 | 49.4 |
| Marion | 60,600 | 21.2 | 17.5 | 29.2 | 11.3 | 10.9 | 12.4 | 39.6 | 29.2 | 52.7 |
| Martin | 22,400 | 19.3 | 16.0 | 33.9 | 12.1 | 11.7 | 13.7 | 39.4 | 37.5 | 43.2 |
| Monroe | 56,900 | 24.7 | 24.8 | 24.2 | 6.3 | 6.0 | 8.6 | 34.1 | 32.4 | 49.0 |
| Nassau | 19,000 | 21.7 | 20.7 | 25.0 | 7.2 | 6.3 | 10.0 | 24.3 | 16.6 | 45.5 |
| Okaloosa | 73,700 | 29.7 | 28.7 | 43.7 | 4.5 | 4.2 | 8.5 | 19.6 | 17.8 | 35.2 |
| Okeechobee | 8,600 | 30.0 | 32.5 | 35.7 | 9.2 | 8.9 | 10.7 | 38.7 | 47.0 | 0.0 |
| Orange | 299,200 | 22.1 | 20.4 | 31.6 | 8.3 | 8.2 | 8.6 | 25.6 | 20.8 | 42.8 |
| Osceola | 21,100 | 17.4 | 15.4 | 34.5 | 17.5 | 18.1 | 12.3 | 24.5 | 20.5 | 39.5 |
| Palm Beach | 274,200 | 19.7 | 16.3 | 31.6 | 11.0 | 11.2 | 10.3 | 33.4 | 25.3 | 48.1 |
| Pasco | 39,500 | 15.7 | 14.9 | 22.2 | 16.1 | 17.2 | 7.6 | 19.4 | 21.2 | 10.0 |
| Pinellas | 419,500 | 13.7 | 12.0 | 31.1 | 16.2 | 17.0 | 7.9 | 21.9 | 18.0 | 36.5 |
| Polk | 213,900 | 20.2 | 18.6 | 27.3 | 9.2 | 9.4 | 8.3 | 19.9 | 17.4 | 27.4 |
| Putnam | 32,500 | 22.9 | 21.0 | 27.1 | 10.2 | 9.8 | 11.1 | 36.2 | 30.0 | 46.6 |
| St. Johns | 32,200 | 19.9 | 16.9 | 29.0 | 11.6 | 10.9 | 13.8 | 42.1 | 24.4 | 73.3 |
| St. Lucie | 45,000 | 20.8 | 16.1 | 30.1 | 10.1 | 10.8 | 8.6 | 36.4 | 37.3 | 35.5 |
| Santa Rosa | 35,800 | 28.8 | 28.6 | 31.7 | 7.3 | 6.9 | 13.3 | 32.3 | 29.4 | 65.8 |
| Sarasota | 92,800 | 13.7 | 12.4 | 26.4 | 13.0 | 13.5 | 8.3 | 26.0 | 23.1 | 39.1 |
| Seminole | 67,100 | 22.7 | 21.1 | 29.0 | 7.6 | 6.3 | 12.2 | 30.8 | 25.2 | 45.9 |
| Sumter | 14,000 | 20.1 | 16.0 | 31.1 | 11.7 | 11.9 | 11.3 | 53.4 | 42.9 | 67.8 |
| Suwannee | 17,100 | 17.8 | 15.8 | 23.2 | 8.8 | 9.8 | 6.4 | 26.2 | 35.7 | 9.2 |
| Taylor | 13,800 | 24.1 | 21.9 | 31.6 | 9.8 | 8.7 | 13.5 | 15.1 | 17.1 | 10.2 |
| Union** | 6,400 | 19.1 | 17.4 | 23.3 | 7.2 | 8.7 | 3.3 | 16.4* | 12.5* | 23.8* |
| Volusia | 149,800 | 17.5 | 15.5 | 28.3 | 14.0 | 14.8 | 10.2 | 34.0 | 26.1 | 56.9 |
| Wakulla | 5,400 | 22.6 | 19.5 | 30.7 | 8.7 | 8.2 | 10.0 | 8.2* | 0.0* | 21.7* |
| Walton | 15,900 | 17.2 | 15.3 | 29.5 | 9.4 | 9.6 | 8.6 | 29.2 | 28.7 | 30.8 |
| Washington | 11,900 | 18.6 | 15.1 | 32.5 | 11.3 | 10.6 | 13.8 | 18.1 | 21.0 | 12.8 |

*Based on less than 100 Live Births, which limits the significance of the rate.

**Large institutional population segments included in resident population base.

## TABLE 58

### MARRIAGES BY RACE, DIVORCES AND ANNULMENTS, BY COUNTY, FLORIDA, 1965

| COUNTY | MARRIAGES |  |  | DIVORCES | ANNUL-MENTS |
|---|---|---|---|---|---|
|  | Total | White | Nonwhite |  |  |
| STATE | 49,399 | 41,565 | 7,834 | 25,069 | 264 |
| Alachua | 694 | 523 | 171 | 240 | 2 |
| Baker | 94 | 85 | 9 | 76 | 0 |
| Bay | 634 | 540 | 94 | 295 | 5 |
| Bradford | 109 | 90 | 19 | 70 | 0 |
| Brevard | 1,468 | 1,306 | 162 | 862 | 7 |
| Broward | 3,767 | 3,192 | 575 | 1,753 | 15 |
| Calhoun | 49 | 43 | 6 | 46 | 0 |
| Charlotte | 140 | 134 | 6 | 62 | 2 |
| Citrus | 120 | 103 | 17 | 64 | 0 |
| Clay | 196 | 167 | 29 | 84 | 0 |
| Collier | 276 | 253 | 23 | 98 | 0 |
| Columbia | 219 | 165 | 54 | 118 | 0 |
| Dade | 9,711 | 8,358 | 1,353 | 5,103 | 72 |
| DeSoto | 115 | 95 | 20 | 60 | 1 |
| Dixie | 50 | 41 | 9 | 19 | 0 |
| Duval | 3,573 | 2,875 | 698 | 2,080 | 14 |
| Escambia | 1,752 | 1,356 | 396 | 979 | 21 |
| Flagler | 78 | 59 | 19 | 110 | 4 |
| Franklin | 47 | 44 | 3 | 26 | 0 |
| Gadsden | 214 | 110 | 104 | 83 | 1 |
| Gilchrist | 42 | 38 | 4 | 15 | 0 |
| Glades | 65 | 47 | 18 | 17 | 1 |
| Gulf | 86 | 62 | 24 | 54 | 1 |
| Hamilton | 60 | 40 | 20 | 24 | 1 |
| Hardee | 196 | 172 | 24 | 217 | 2 |
| Hendry | 145 | 116 | 29 | 77 | 0 |
| Hernando | 133 | 116 | 17 | 57 | 0 |
| Highlands | 208 | 162 | 46 | 101 | 2 |
| Hillsborough | 4,093 | 3,577 | 516 | 2,007 | 17 |
| Holmes | 82 | 79 | 3 | 73 | 0 |
| Indian River | 303 | 232 | 71 | 123 | 2 |
| Jackson | 209 | 171 | 38 | 74 | 0 |
| Jefferson | 86 | 39 | 47 | 53 | 1 |
| Lafayette | 25 | 25 | 0 | 5 | 0 |
| Lake | 508 | 393 | 115 | 1,157 | 15 |
| Lee | 653 | 570 | 83 | 272 | 0 |
| Leon | 548 | 414 | 134 | 227 | 2 |
| Levy | 97 | 83 | 14 | 52 | 1 |
| Liberty | 17 | 16 | 1 | 15 | 1 |
| Madison | 82 | 64 | 18 | 58 | 0 |
| Manatee | 663 | 571 | 92 | 272 | 2 |
| Marion | 540 | 404 | 136 | 158 | 1 |
| Martin | 188 | 158 | 30 | 103 | 0 |
| Monroe | 575 | 527 | 48 | 309 | 2 |
| Nassau | 124 | 103 | 21 | 40 | 0 |
| Okaloosa | 470 | 433 | 37 | 423 | 6 |
| Okeechobee | 109 | 94 | 15 | 36 | 0 |
| Orange | 2,617 | 2,225 | 392 | 487 | 4 |
| Osceola | 288 | 241 | 47 | 101 | 1 |
| Palm Beach | 2,423 | 1,874 | 549 | 1,003 | 10 |
| Pasco | 494 | 446 | 48 | 125 | 1 |
| Pinellas | 3,294 | 3,004 | 290 | 1,611 | 21 |
| Polk | 2,076 | 1,757 | 319 | 918 | 12 |
| Putnam | 306 | 233 | 73 | 406 | 4 |
| St. Johns | 243 | 193 | 50 | 211 | 2 |
| St. Lucie | 436 | 285 | 151 | 178 | 0 |
| Santa Rosa | 260 | 245 | 15 | 120 | 0 |
| Sarasota | 836 | 771 | 65 | 377 | 3 |
| Seminole | 542 | 411 | 131 | 293 | 3 |
| Sumter | 167 | 135 | 32 | 154 | 1 |
| Suwannee | 118 | 98 | 20 | 50 | 2 |
| Taylor | 140 | 104 | 36 | 52 | 0 |
| Union | 56 | 42 | 14 | 51 | 0 |
| Volusia | 1,247 | 1,056 | 191 | 588 | 0 |
| Wakulla | 57 | 43 | 14 | 0 | 0 |
| Walton | 102 | 87 | 15 | 54 | 0 |
| Washington | 84 | 70 | 14 | 43 | 0 |

## TABLE 59

### VITAL STATISTICS SCOREBOARD BASED ON PROMPTNESS AND COMPLETENESS OF CERTIFICATES FILED, FLORIDA, 1965

| COUNTY | Rank | Per Cent of Certificates Filed on Time |  | Per Cent of Complete Certificates |  | Per Cent of Monthly Reports Submitted on Time | Total Score (Maximum = 500) | Change from 1964 Total Score |
|---|---|---|---|---|---|---|---|---|
|  |  | Births | Deaths* | Births | Deaths** |  |  |  |
| STATE |  | 93.9 | 97.6 | 99.8 | 99.4 | 95.8 | 486.5 | + 1.5 |
| Jacksonville-Duval | 1 | 100.0 | 100.0 | 100.0 | 99.5 | 100.0 | 499.5 | - 0.5 |
| Citrus | 2 | 100.0 | 100.0 | 99.3 | 100.0 | 100.0 | 499.3 | + 0.1 |
| Martin | 2 | 100.0 | 99.3 | 100.0 | 100.0 | 100.0 | 499.3 | + 2.4 |
| Manatee | 4 | 99.8 | 99.7 | 99.8 | 99.1 | 100.0 | 498.4 | + 0.4 |
| Orange | 5 | 99.2 | 99.2 | 100.0 | 99.7 | 100.0 | 498.1 | + 0.6 |
| St. Johns | 5 | 99.8 | 100.0 | 100.0 | 98.3 | 100.0 | 498.1 | + 1.5 |
| Hillsborough | 7 | 97.5 | 100.0 | 100.0 | 99.7 | 100.0 | 497.2 | + 0.9 |
| Volusia | 7 | 99.7 | 98.2 | 99.7 | 99.6 | 100.0 | 497.2 | - 0.6 |
| Alachua | 9 | 98.9 | 98.9 | 100.0 | 99.3 | 100.0 | 497.1 | - 0.5 |
| Escambia | 10 | 99.7 | 97.9 | 99.9 | 99.5 | 100.0 | 497.0 | + 0.8 |
| Bradford | 11 | 99.2 | 98.2 | 100.0 | 99.4 | 100.0 | 496.8 | - 0.9 |
| Monroe | 12 | 99.0 | 98.6 | 99.8 | 99.3 | 100.0 | 496.7 | + 5.0 |
| Seminole | 13 | 99.9 | 100.0 | 98.4 | 98.3 | 100.0 | 496.6 | - 0.2 |
| Dade | 14 | 97.0 | 100.0 | 99.9 | 99.6 | 100.0 | 496.5 | + 0.6 |
| Jefferson | 15 | 98.9 | 98.9 | 99.6 | 98.9 | 100.0 | 496.3 | - 1.4 |
| Polk | 16 | 98.4 | 98.4 | 99.5 | 99.2 | 100.0 | 495.5 | - 0.7 |
| Washington | 17 | 99.0 | 97.3 | 100.0 | 99.1 | 100.0 | 495.4 | + 9.6 |
| Broward | 18 | 95.9 | 100.0 | 100.0 | 99.1 | 100.0 | 495.0 | - 1.1 |
| Charlotte | 19 | 100.0 | 100.0 | 98.3 | 96.3 | 100.0 | 494.6 | + 5.0 |
| Gilchrist | 20 | 100.0 | 93.8 | 100.0 | 100.0 | 100.0 | 493.8 | +50.6 |
| Brevard | 21 | 97.2 | 98.1 | 99.6 | 98.2 | 100.0 | 493.1 | +12.0 |
| Palm Beach | 21 | 94.7 | 98.7 | 99.9 | 99.8 | 100.0 | 493.1 | - 1.2 |
| Bay | 23 | 98.2 | 95.1 | 99.8 | 99.6 | 100.0 | 492.7 | + 4.2 |
| Nassau | 23 | 96.3 | 99.3 | 98.5 | 98.6 | 100.0 | 492.7 | + 6.2 |
| Franklin | 25 | 100.0 | 100.0 | 100.0 | 100.0 | 91.7 | 491.7 | - 0.3 |
| Baker | 26 | 100.0 | 100.0 | 100.0 | 99.4 | 91.7 | 491.1 | - 6.4 |
| Indian River | 26 | 98.2 | 96.7 | 97.5 | 98.7 | 100.0 | 491.1 | +31.5 |
| Lee | 28 | 91.2 | 99.9 | 99.9 | 99.8 | 100.0 | 490.8 | + 0.9 |
| Gulf | 29 | 93.8 | 100.0 | 98.2 | 98.6 | 100.0 | 490.6 | + 4.6 |
| Sarasota | 30 | 99.3 | 99.8 | 99.9 | 99.7 | 91.7 | 490.4 | - 0.2 |
| Hernando | 31 | 94.2 | 96.7 | 99.7 | 99.5 | 100.0 | 490.1 | - 5.7 |
| Clay | 32 | 91.8 | 96.1 | 100.0 | 99.4 | 100.0 | 487.3 | - 2.7 |
| Putnam | 33 | 93.8 | 94.8 | 98.6 | 99.7 | 100.0 | 486.9 | + 7.6 |
| Hardee | 34 | 99.4 | 98.1 | 97.0 | 98.1 | 91.7 | 484.3 | -13.0 |
| Madison | 35 | 95.2 | 99.2 | 98.6 | 99.2 | 91.7 | 483.9 | + 8.0 |
| Santa Rosa | 36 | 95.5 | 92.9 | 97.4 | 97.4 | 100.0 | 483.2 | - 0.8 |
| Marion | 37 | 90.5 | 93.8 | 99.4 | 99.4 | 100.0 | 483.1 | +13.1 |
| Dixie | 38 | 100.0 | 82.1 | 100.0 | 100.0 | 100.0 | 482.1 | +61.8 |
| Glades | 39 | 100.0 | 100.0 | 100.0 | 90.0 | 91.7 | 481.7 | +98.4 |
| Suwannee | 40 | 90.2 | 100.0 | 99.7 | 98.5 | 91.7 | 480.1 | + 6.4 |
| Flagler | 41 | 94.8 | 92.2 | 100.0 | 100.0 | 91.7 | 478.7 | - 2.8 |
| Leon | 42 | 85.5 | 94.2 | 100.0 | 98.8 | 100.0 | 478.5 | +37.1 |
| Walton | 43 | 93.8 | 87.5 | 99.0 | 97.9 | 100.0 | 478.2 | -10.0 |
| Pinellas | 44 | 80.7 | 95.9 | 99.9 | 99.8 | 100.0 | 476.3 | + 1.5 |
| Holmes | 45 | 97.0 | 81.7 | 98.5 | 96.3 | 100.0 | 473.5 | + 4.9 |
| Hendry | 46 | 84.2 | 92.9 | 100.0 | 100.0 | 91.7 | 468.8 | -24.0 |
| Levy | 47 | 80.0 | 87.7 | 100.0 | 100.0 | 100.0 | 467.7 | - 5.9 |
| Taylor | 48 | 78.3 | 93.7 | 100.0 | 100.0 | 91.7 | 463.7 | -18.3 |
| Collier | 49 | 80.4 | 93.6 | 98.8 | 99.0 | 91.7 | 463.5 | +31.9 |
| Pasco | 50 | 75.9 | 89.4 | 99.6 | 98.3 | 100.0 | 463.2 | +25.9 |
| Osceola | 51 | 97.3 | 99.0 | 99.5 | 99.0 | 66.7 | 461.5 | -10.7 |
| DeSoto | 52 | 96.5 | 97.7 | 99.1 | 99.3 | 66.7 | 459.3 | - 9.9 |
| Sumter | 53 | 80.7 | 76.0 | 98.2 | 100.0 | 100.0 | 454.9 | -14.7 |
| Lake | 54 | 69.8 | 85.4 | 99.5 | 98.5 | 100.0 | 453.2 | -21.3 |
| Hamilton | 55 | 81.2 | 73.2 | 99.1 | 97.2 | 100.0 | 450.7 | - 6.5 |
| Wakulla | 56 | 80.0 | 95.5 | 100.0 | 95.5 | 75.0 | 446.0 | -35.7 |
| Calhoun | 57 | 71.9 | 75.6 | 100.0 | 97.8 | 100.0 | 445.3 | -19.0 |
| Highlands | 58 | 70.6 | 92.8 | 98.7 | 99.3 | 83.3 | 444.7 | +14.7 |
| Union | 59 | 80.0 | 80.6 | 100.0 | 100.0 | 83.3 | 443.9 | + 8.1 |
| St. Lucie | 60 | 63.9 | 78.4 | 99.9 | 98.4 | 100.0 | 440.6 | -33.8 |
| Gadsden | 61 | 49.1 | 88.1 | 99.5 | 98.5 | 100.0 | 435.2 | + 2.3 |
| Jackson | 62 | 55.6 | 79.1 | 99.3 | 97.9 | 100.0 | 431.9 | -12.5 |
| Okaloosa | 63 | 69.4 | 79.5 | 99.3 | 99.3 | 83.3 | 430.8 | + 2.7 |
| Columbia | 64 | 49.7 | 86.1 | 99.4 | 98.0 | 91.7 | 424.9 | -19.4 |
| Liberty | 65 | 50.0 | 78.6 | 100.0 | 100.0 | 91.7 | 420.3 | -12.6 |
| Lafayette | 66 | 66.7 | 91.7 | 66.7 | 91.7 | 91.7 | 408.5 | -51.1 |
| Okeechobee | 67 | 44.0 | 84.7 | 99.1 | 95.3 | 75.0 | 398.1 | -38.4 |

*Includes all death certificates and stillbirth certificates

**Includes all incomplete death and stillbirth certificates and unreturned cause-of-death queries

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